

# THE BRICKBUILDER.

VOL. 13

APRIL 1904

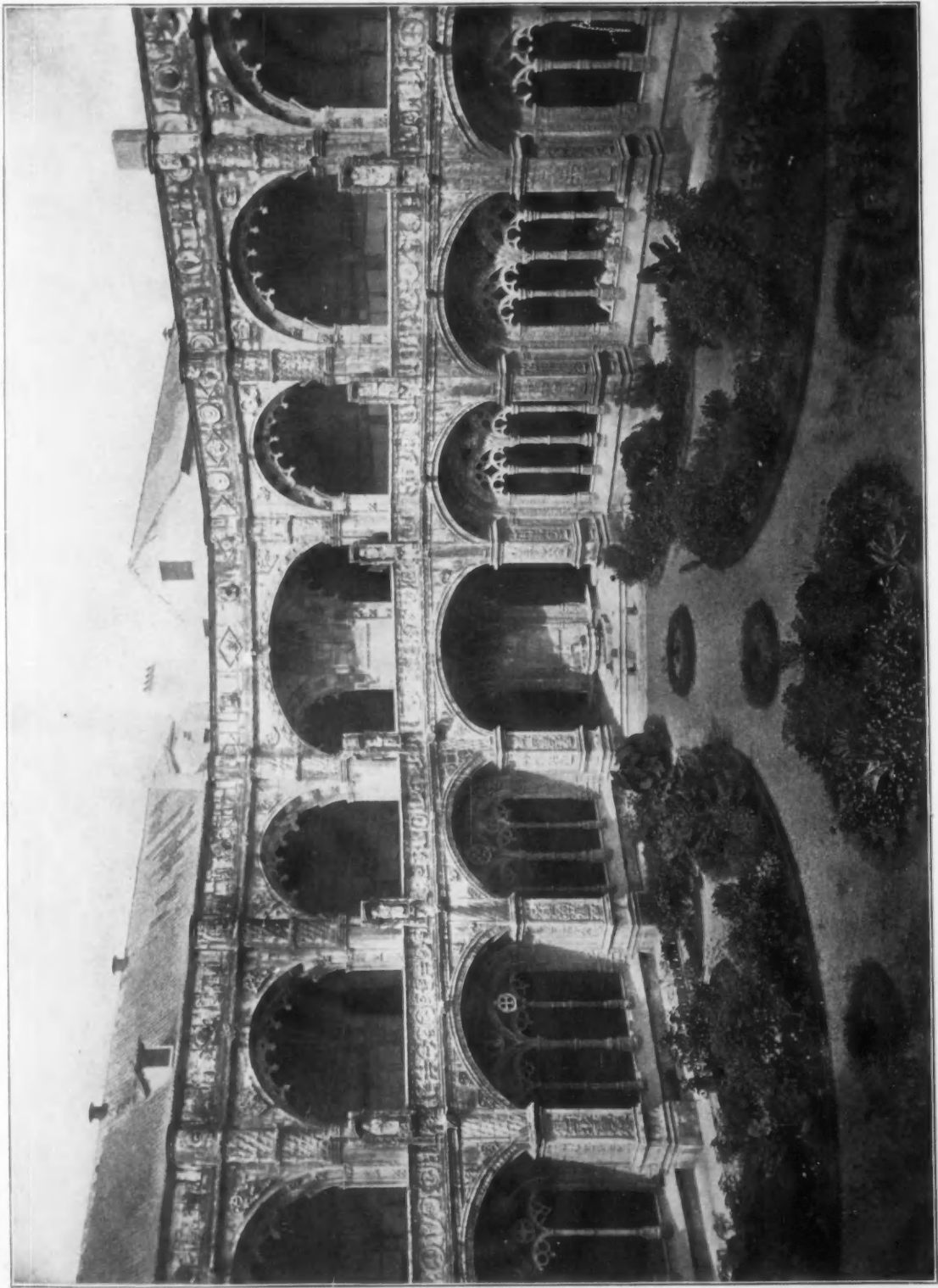
No. 4

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FROM WORK OF RAYMOND F. ALMIRALL, COPE & STEWARDSON, GEORGE  
LYON HARVEY, HOWELLS & STOKES, KILHAM & HOPKINS,  
McKIM, MEAD & WHITE.

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✓ CLOISTERS OF THE CONVENT OF BELEM, NEAR LISBON, SPAIN.

# THE BRICKBUILDER

VOL. 13 No. 4 DEVOTED TO THE INTERESTS OF ARCHITECTURE IN MATERIALS OF CLAY APRIL 1904

## THE BRICKBUILDER.

PUBLISHED MONTHLY BY

ROGERS & MANSON,

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## ADVERTISING.

Advertisers are classified and arranged in the following order:—

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Advertisements will be printed on cover pages only.

## MODEL WORKINGMEN'S HOUSES.

THE housing of workingmen is a subject which has engaged the study of a great many careful thinkers at different times and in different countries. Nearly every large manufacturer likes to see his employees well taken care of and, as far as the men will allow him, takes an interest in putting up tasteful, well-arranged houses for them. The extent to which we in this country can profit by the experience abroad in these lines is not very large. We print elsewhere a very interesting account of some of the results accomplished in England. It will be noticed in this article that in the cheaper houses described the bathroom facilities are extremely primitive. The idea of a tub being sunk in the floor of the kitchen near the hearth and covered by a standing or draining board may meet the requirements of the English laborer, but would surely not answer in many of our manufacturing towns. Furthermore, in figuring out the returns from these workingmen's houses evidently the land is not considered at all and nothing is allowed for depreciation, and

even our most philanthropic mill owners would be hardly satisfied with an investment of that sort.

There is one point about these English cottages, however, which is certainly deserving of imitation by us, and that is the use of brick for the external walls. The average workingman's house hereabouts costs from twelve to fifteen hundred dollars for five rooms and bath. Usually the houses are built for two families, one above the other, making the total cost for the house itself in the vicinity of three thousand dollars. Upon such houses there does not seem to be a great deal of difficulty in obtaining a return of five hundred dollars a year, which will easily net nearly six per cent. Now if our philanthropically inclined mill owners could feel disposed to pay the slight additional advance in cost for constructing the outside walls in brick, which for the average house probably would not exceed two hundred dollars, while the income derived therefrom would probably not be at all increased, the cost of repairs would be diminished, the life of the structure would be greatly increased, and the resulting appearance to the community would be vastly better.

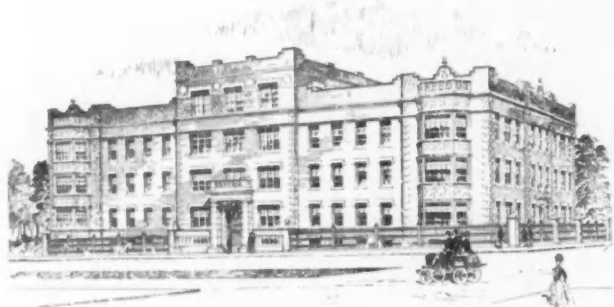
It has been our fortune to visit many of the workingmen's colonies in the United States and in foreign countries, and the difference between what is expected here and what is found abroad is that, generally speaking, the foreign colonies present a very attractive external appearance, especially in England and in Italy, and are more or less surrounded by judicious planting, but the personal comforts of the interior are quite restricted, and the arrangement of rooms is what we should call decidedly crude. In this country, on the contrary, our workingmen have a good bathroom with open plumbing and a very attractive interior, but the exterior aspect of our colonies is usually most hopelessly uninteresting, and there is seldom much attempt at gardening or planting of any description. Where our workingmen's houses attempt to be picturesque they generally hopelessly fail. The English cottage is reduced to its simplest factor,—the wall of brick full of texture, a simple, unbroken roof and a lot of green foliage and flowers. These give the picturesque grouping which every visitor admires, and if we can only couple our internal arrangements with English external simplicity and charm our workingmen's dwellings ought to be models for the world.

We allow it to be our specific purpose to present the merits of burnt clay in architecture, and when the charm of good brickwork is made manifest there is certainly sufficient justification.

## Hospital Planning. IV.

BY BERTRAND E. TAYLOR.

THERE can be no doubt but that the general hospital of the future will be a pavilion plan hospital, except in the case of the smaller ones, those of twenty beds or less, when the limitations of money or land necessitate the adoption of what may be termed the semi-isolated pavilion type of the block plan. It seems to be advisable to make use of the single building or block plan type when the conditions named are imposed, if, as is quite possible, the absolutely necessary departments are isolated by means of fire walls and doors, as shown in the Windsor and Exeter plans illustrated in



NEW ENGLAND DEACONESSES HOSPITAL, LONGWOOD, MASS.  
Kendall, Taylor & Stevens, Architects.

Article III of this series (pages 52 and 53, THE BRICKBUILDER for March, 1904).

These plans illustrate possibilities of a development of this idea in the case of a small hospital that is likely to grow little in its scope, especially when the funds are limited.

The plans of the Deaconesses Hospital, Longwood, Mass., and the Union Hospital, Fall River, Mass., two urban hospitals of about one hundred beds each, illustrate the possibilities of the adoption of the pavilion idea to the block plan when the number of beds required is large and the area of available land is small.

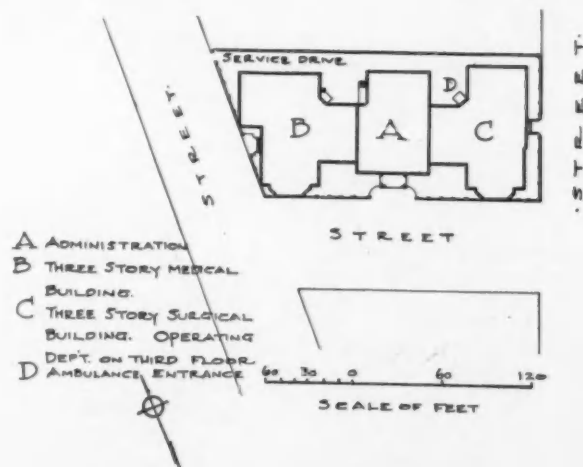
The La Crosse Hospital, designed by George L. Harvey of Chicago, was built as a small block plan hospital with the idea of future extension by the erection of two wings, as shown on the block plan. This hospital when thus completed would make possibly a one hundred bed hospital of the semi-isolated pavilion type.

These five hospitals are just as surely pavilion hospitals in most of the essential elements as though they were made up of three separate buildings with connecting corridors. They show that it is possible to obtain a number of the vital elements on a restricted lot, but not all, and that fully isolated pavilions should be adopted wherever possible.

In a comparative analysis of existing pavilion hospitals we observe several radical differences in the general arrangement. We see that in some hospitals the general pavilions are invariably of one story, while in others they are of two stories. For a number of years the popular idea has been that a pavilion should never be over one story in height, and this rule has been followed until within a short time, almost invariably in the smaller

hospitals. Even in some of the large hospitals the prejudice in favor of one-story pavilions has been so strong that such pavilions have been built even where pavilions of two or more stories were needed. To-day it seems to have been fully demonstrated that, if properly arranged, there can be no objection to a pavilion of two or even four or five stories. The upper wards are always more attractive, better lighted and have better air, less dust and noise than the lower. In a very small hospital, there is no room for argument, one-story pavilions will always be the ideal scheme, but when we come to consider a hospital of fifty or one hundred or more beds on a restricted area or on a sharp slope that does not admit of an extended scheme, then it will be wise to consider two-story pavilions.

In such cases we must either cover the lot at once, thus effectually preventing expansion, which is always an extremely shortsighted policy, or we must crowd the pavilions together so near that the wards and rooms get the sun but a very short time, and in the summer when windows are open everything happening in a pavilion is unpleasantly apparent in the one adjoining. Again, the strict adherence to the one-story pavilion hobby not only induces these evils, but occasionally necessitates the building of pavilions facing north, when the general scheme has pavilions properly designed with a southerly extension and solaria, and these northerly projected pavilions have north solaria, which are ideal for a photograph gallery or studio, but hardly for a hospital. The plans shown in Article III fully illustrate and demonstrate these points, and seem to show conclusively that



PLAN, NEW ENGLAND DEACONESSES HOSPITAL.

under the conditions outlined above a two-story pavilion scheme would be decidedly preferable to a crowded one-story scheme.

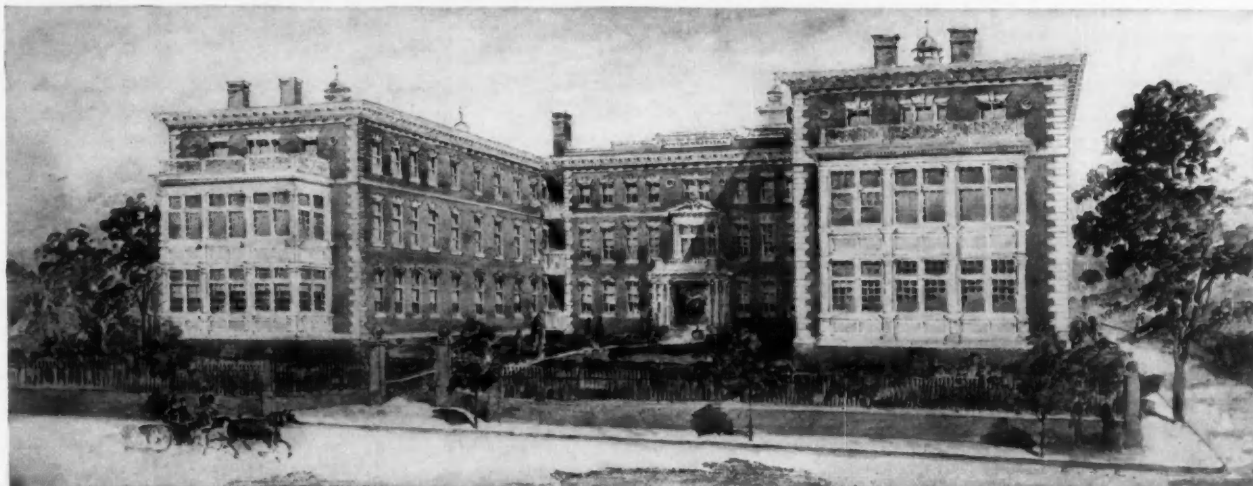
The principal objection to a two-story pavilion seems to be that an elevator will be necessary for use in moving patients. A few years ago this would have been a very serious matter, but to-day with the automatic electric and extremely simple and safe hydraulic plunger elevators that require no attendant and the slightest engineering attention, there can be little objection to an elevator. The first cost is not a large per cent of the cost of a hospital of any size, and the cost of running



and maintaining is very small unless it is in continual use, a condition that would hardly be likely. Without an elevator the service would be no more difficult over one flight of stairs than through the forty or fifty feet to the same ward if it were in an adjoining pavilion. The elevator, however, is necessary for the patients.

Regarding the question of distance between pavilions, the old rule was that this space should be at least twice

hospital, the centre of administration, the business office and home of the superintendent or matron, of the house physician or interne, the meeting place of the corporation and committees, and the only place where the public have a right to enter until permission is granted for further inspection. The general purposes are the same in a large or small hospital, but in a small hospital various other departments of hospital work have of necessity



UNION HOSPITAL, FALL RIVER, MASS.

Kendall, Taylor &amp; Stevens, Architects.

the height, — that is, if pavilions were twenty feet high the distance between should be at least forty feet, — and it is quite evident that wherever possible forty feet should be the minimum.

These remarks concerning the spacing of pavilions have special reference to parallel pavilions, and obviously do not apply to the case of pavilions projected diagonally from the corners of the administration building, or what might be termed the diagonal pavilion type, like those of St. Luke's Hospital, New York, in which case a short corridor is quite admissible, and the space thus obtained from pavilion to pavilion is ample.

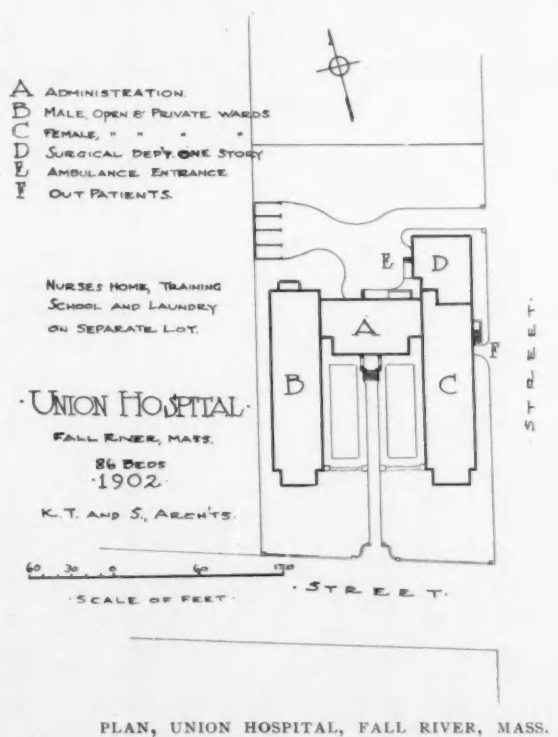
The "radial" pavilion type, a variation of the parallel pavilion type, first demonstrated by the Duke of Galliera in the San Andrea Hospital, Genoa, Italy, admits of a closer spacing of the pavilions at the connecting corridor line, and the possibility of a better general direction, more sun, circulation and view and greater isolation, for a given cost of construction. (See examples illustrated.)

The administration building is the entrance to the

to find a place under the roof of the administration building.

A large city general hospital has a lodge at the entrance, with officials to direct the coming and going of all persons. There are also the out-patient medical and the out-patient surgical departments, each generally housed in a special pavilion with intricate, special sub-departments all adapted to their special work, a pathological building, a library building, nurses' home, etc. There is the administration building with the large entrance lobby and waiting rooms, the office for the assistant superintendents and house staff, and the business organization office, file room, vault, etc., the office for the superintendent, with outer office for special sten-

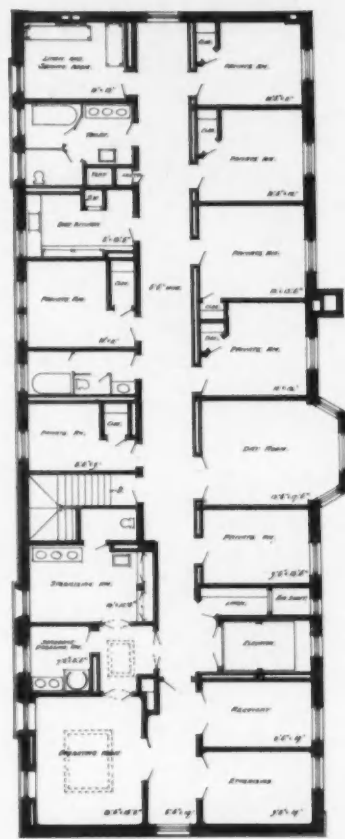
nographer and bookkeeper, telephone room, the board room, superintendent of nurses, housekeeper's room, toilets, waiting rooms, etc., etc., all on the first floor. In a very small hospital all these various departments must necessarily be condensed into one building, and quite generally the service department, kitchen, laundry, heating plant, dining rooms, nurses' home and training



PLAN, UNION HOSPITAL, FALL RIVER, MASS.



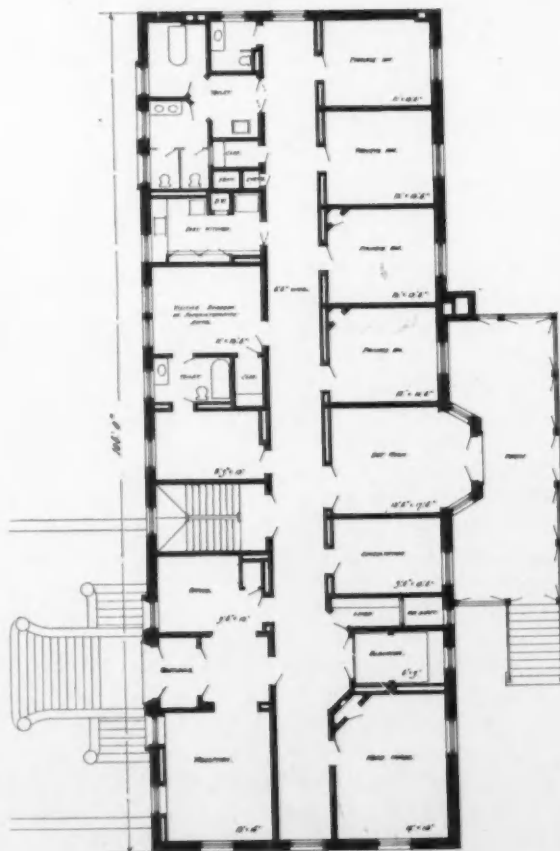
SECOND FLOOR PLAN.



THIRD FLOOR PLAN.



BASEMENT PLAN.

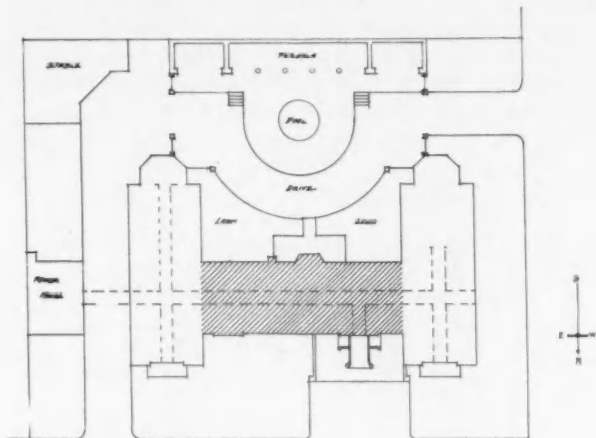


FIRST FLOOR PLAN.

LA CROSSE HOSPITAL, LA CROSSE, WIS.

school, residence of superintendent and interne, servants' rooms, etc., must all be added in a rear extension, so that the work that should be done in eight or ten buildings must be done in one.

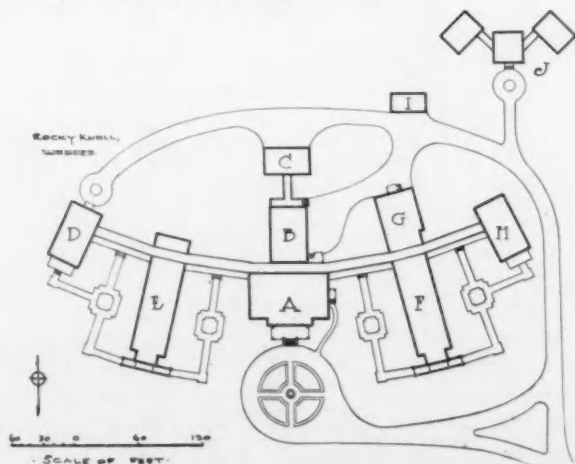
There is a tendency to magnify the administration building, to make it a more imposing and seemingly



PLAN, LA CROSSE HOSPITAL, LA CROSSE, WIS.  
George Lyon Harvey, Architect.

important central feature in the group. On æsthetic grounds this is quite pardonable, and most of our large general hospitals have very imposing administration buildings that have fulfilled the artistic requirements much more successfully than the practical.

An unusually interesting and simple little administration building is that of the Bradford, Pa., Hospital. This has the usual office and reception room, a physician's room with toilet, lockers, etc., a filing and telephone room and pharmacy or drug room, a public toilet, and at the rear of the transverse corridor a dining room with pantry and an out-patient department with examination room, eye and ear dark room, and X-ray room and, what is very important but rarely seen in a small hospital, a specially fitted massage room.



PLAN, SYMMES HOSPITAL, ARLINGTON, MASS.  
Example of the Radial Pavilion Type. Area of lot about 8 acres.  
Kendall, Taylor & Stevens, Architects.

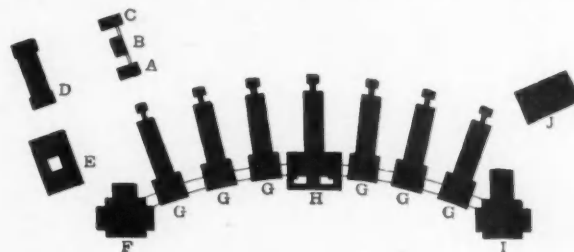
A. Administration and Out-patients; B. Service Building; C. Boiler House and Laundry; D. Nurses' Home and Training School; E. Two-Story Medical Pavilion; F. Two-Story Surgical Pavilion; G. Surgical Department; H. Private Pavilion; I. Horse and Ambulance Sheds; J. Isolation Department.

This hospital is unique in having the entire kitchen department in a very complete little fireproof building entirely isolated from the usual position at the rear of the administration building, the food evidently having to be taken to the administration building as well as to pavilions through open corridors in heated food wagons.

The second story of the administration building has the usual rooms for matron or superintendent and house physician or interne with private baths, — unusually ample quarters which are to be commended. There is also a very ample laboratory and pathological room, a special room and a director's room that can be used for a lecture room, also a woman's toilet for visitors.

All this is a very simple and practical gathering together of the few rooms that should be in a central location and allowing all others to be isolated.

The other extreme and more usual type is well illustrated by the plans of the Leonard Morse Hospital, Natick, Mass., designed by Shaw & Hunnewell in 1898, which is planned as an interesting twenty-five bed hospital. The proposed completed scheme is shown, but the administration building only has been built, and this is run quite successfully as a twelve-bed block plan hospital. In order to get this number of beds some of the



SAN ANDREA HOSPITAL, GENOA, ITALY.

The Radial Pavilion Type

A. Fuel; B. Gardener's House; C. Upholstering Department; D. Laundry; E. Mortuary, Dissecting Room and Museum; F. Students' and Lecture Room; G. Wards; H. Chapel; I. Administration Building; J. Convalescent Paying Patients.

nurses' rooms in the third story have to be used for patients. The plan does not show the temporary arrangements for operating department, but this is installed in the end of the sun room and passage. The exterior is artistic and dignified, and if the building were more perfectly adjusted to its limited work it would make a most interesting example of a palatial small hospital.

Most administration buildings are burdened with an assortment of private rooms on the second floor, which are never properly so placed. If a special pavilion cannot be built, an isolated portion of a general pavilion can be specially arranged for private patients desiring extra care, better rooms and isolation from free or open ward patients.

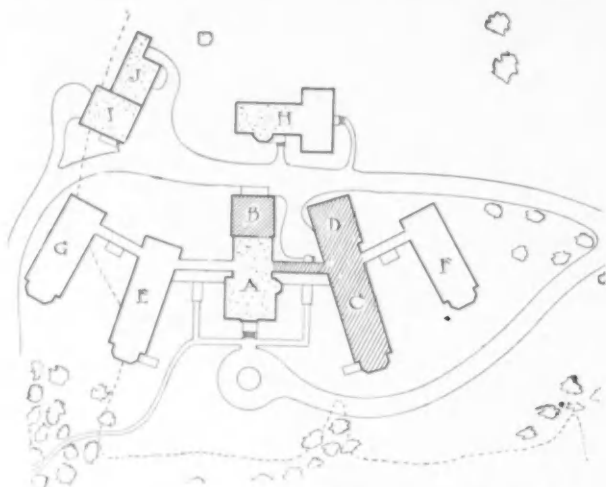
There are many objections to the prevalent use of the second story of the administration building for private wards. The necessary business of the institution, the constant coming and going of doctors, visitors, messengers, the continual use of the telephone, are all more or less disturbing to the occupants of second-floor rooms.

The matron or superintendent must have the privilege of entertaining friends at times, and it is absolutely impossible to do so with any comfort either to themselves or the patients, as absolute quiet must be maintained.



There must be times of relaxation for both officers and nurses, and if it is impossible to talk freely and laugh at the table the value and success of the service are certainly diminished.

If patients' rooms are placed on the second floor and nurses' or servants' rooms on the third floor, as is usually



PLAN, LOWELL GENERAL HOSPITAL, LOWELL, MASS.

Kendall, Taylor & Stevens, Architects.

A, Administration (Old Mansion); B, Brick Kitchen; C, Surgical Pavilion; D, Operating Department; E, Medical Pavilion; F, Private Pavilion; G, Children's Pavilion; H, Nurses' Home; I, Heating, Laundry and Servants; J, Stable.

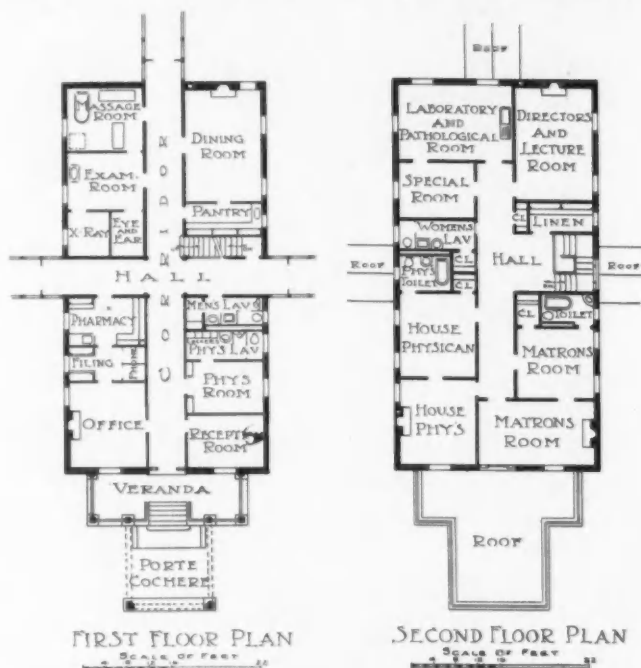
the case, the patients, and these too paying the largest price per week, are between two sources of annoyance that the most careful management cannot wholly eradicate.

It sometimes happens that, owing to the restrictions of the lot, it is necessary to depart from the ideal in respect to location of the operating department.

One of the most practical and least objectionable dispositions of the operating department, where the lot is limited and an elevator is used, is that shown in the plans of the Norfolk Protestant Hospital and the Menominee, Mich., Hospital. In both of these hospitals the operating department is placed on the third floor of the administration building. As it is quite necessary to have an elevator in every hospital of more than one story, the place for that elevator, if there is but one, is in the central or administration building, and an operating depart-

ment is thus easily reached through the connecting corridors and elevator and is thoroughly isolated and perfectly lighted and very convenient for surgeons and nurses.

The plans of the Hale Hospital of Haverhill (see plate 24, *THE BRICKBUILDER* for March, 1904) show a unique disposition of the operating department in the rear of and, apparently, a component part of the administration building. This location fulfills all the points of convenience and gives proper lighting, but it would be much better placed a few feet farther back and connected by a short corridor, as the same architects have wisely



PLANS, ADMINISTRATION BUILDING, BRADFORD HOSPITAL, BRADFORD, PA.  
Green & Wicks, Architects.

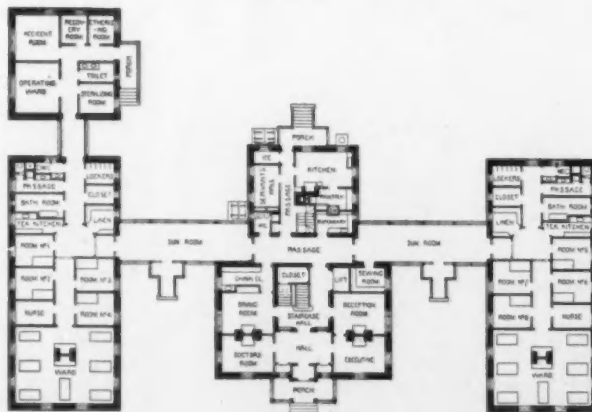
shown in their plans for the Lawrence General Hospital (see plate 23, *THE BRICKBUILDER* for March, 1904).

These plans and the plans by the same architects of the hospital at Youngstown, Ohio, show an interesting and unique disposition of the kitchen department. In each case the kitchen department is in the nurses' home.



ADMINISTRATION BUILDING, LEONARD MORSE HOSPITAL, NATICK, MASS.

Shaw & Hunnewell, Architects.

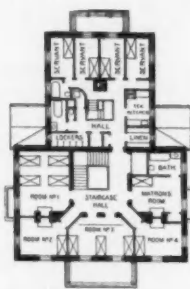


FIRST FLOOR PLAN FOR LEONARD MORSE HOSPITAL.

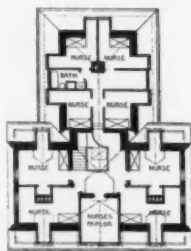


This is an economical arrangement and has some good points, but would be better placed in a separate pavilion. In the plan for the Lawrence General Hospital the kitchen department is in a new extension of the south-east pavilion,—a unique idea that would seem to be questionable.

In the pavilion hospitals illustrated in these articles we find various ideas concerning the arrangement of the connecting corridors. The generally accepted standard for northern latitudes seems to be a one-story enclosed corridor with a basement corridor for piping, service, etc. There are, however, several instances where one-story open corridors have been in use for many years with apparently perfect satisfaction, and for perfect isolation open corridors are most desirable; the basement corridor being fairly convenient for use during stormy weather.



SECOND FLOOR.  
ADMINISTRATION BUILDING, LEONARD MORSE HOSPITAL.



THIRD FLOOR.

The Boston City Hospital has had such connections for the past forty years, and nearly all of the recent buildings have been connected in the same way. The Cambridge Hospital has open corridors connecting all its buildings, and the matron recently said she saw no objection to them. In some few cases buildings are connected by a subway, either wholly or partially underground, lighted by top lights. One of this type is shown in process of construction in the photograph of the subway of the Newton Hospital, leading to the nurses' home, and very economically and successfully built of the Guastavino laminated tile.

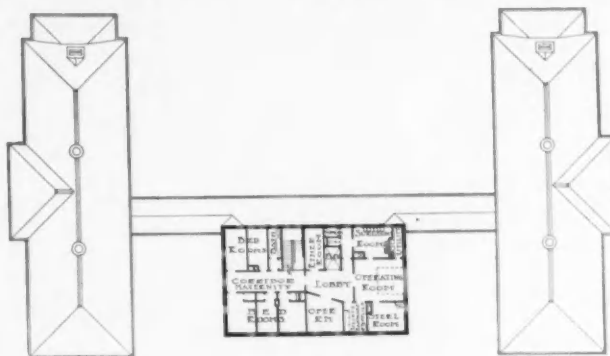
Two-story corridors for a two-story scheme are convenient, but look very awkward if enclosed, and they cut off so much sun and air as to seriously interfere with the use of rooms in any north extension of the pavilions. It seems better, therefore, to keep the corridor one story and, if necessary to connect the second floors, to use an open balcony on a flat roof.

#### NEW BOOKS.

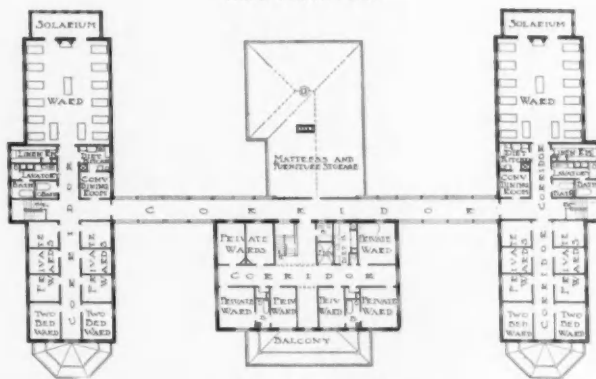
THE NONMETALLIC MINERALS. Their Occurrence and Uses. By George P. Merrill, Curator of Geology in the United States National Museum, etc., etc. New York: John Wiley & Sons. Price \$4.00.

Mr. Merrill's previous excellent work upon the stones for building and decoration has been noticed in these columns. The present volume is in a sense a continuation, taking up very exhaustively the various nonmetallic minerals which are used so extensively in the arts and sciences, such as the carbon compounds, the various oxides, sulphides and arsenides which enter into the compositions of paints and dyes, the tripolites, emery, carbon-

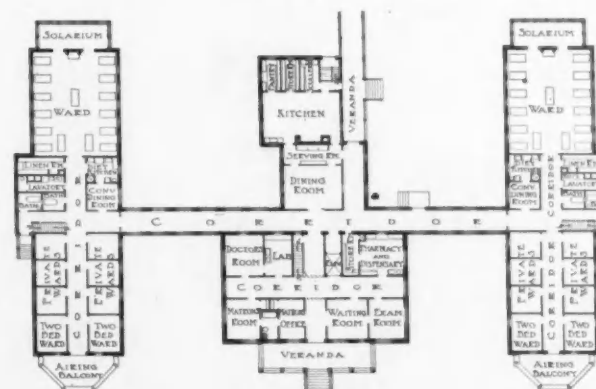
ates, silicates, etc. The list is a long one, and the casual reader will be surprised to see how many of the natural products are utilized directly and indirectly. The list includes also the grindstones, molding sands, polishing stones and road-making materials. Under the general classification of silicates there is contained a great deal of valuable information in regard to the clays, which are defined as "heterogeneous aggregates of hydrous and



THIRD FLOOR PLAN.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

NORFOLK PROTESTANT HOSPITAL, NORFOLK, VA.  
Kendall, Taylor & Stevens, Architects.

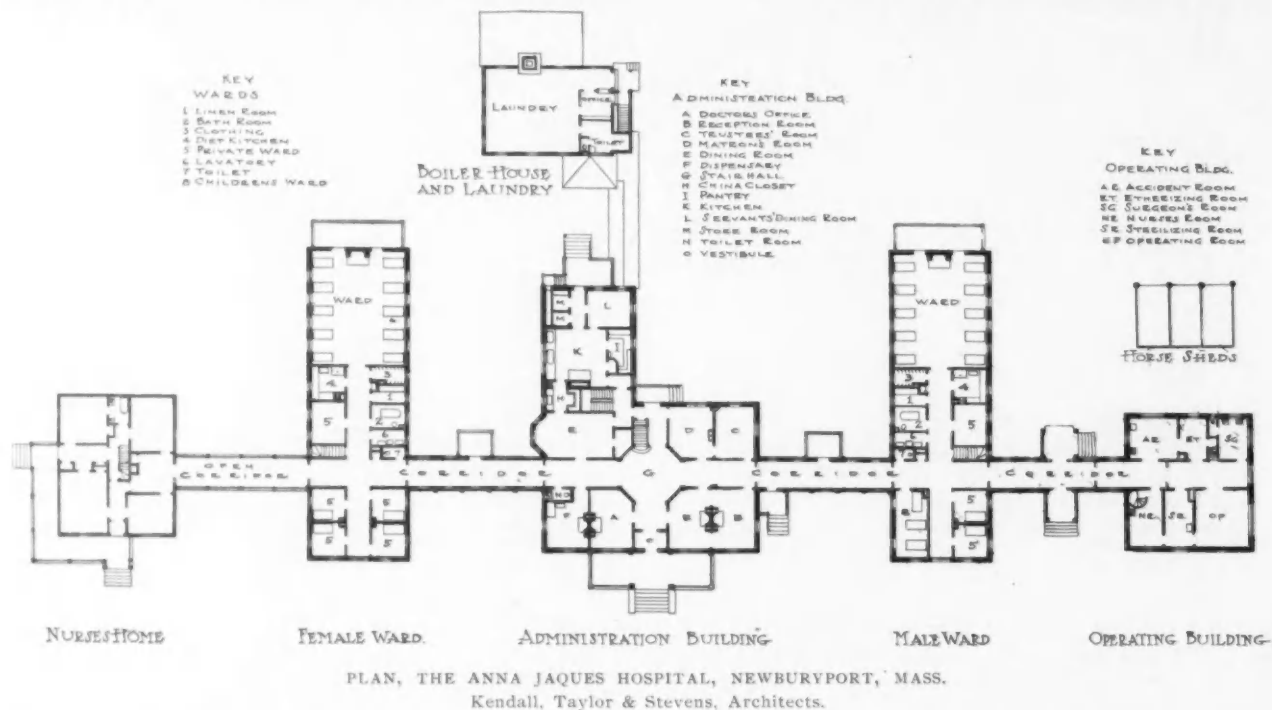
anhydrous aluminous silicates, free silica, and ever-varying quantities of free iron oxides and calcium and magnesian carbonates, all in a finely comminuted condition." This is a definition which we never heard duplicated, but which, in spite of its long words, is very comprehensive and exact. The whole chapter on clay is most excellent. We notice one correction of a very common error. A number of the technical reports on the results of the Balti-

more fire account for the occasional cracking or breaking away of the bottom flanges of the terra-cotta floor arches by the assumption that the material under the action of heat would expand, causing a compressile strain between the members, resulting in the shearing away of the terra-cotta. Mr. Merrill states distinctly that "a clay, when all the water of crystallization is expelled, will not shrink any more at red heat, but with increased heat will shrink more and more up to the moment of fusion. A pure kaolin apparently shrinks when heated a second time, even if

men and ought to find a place in the library of every architect.

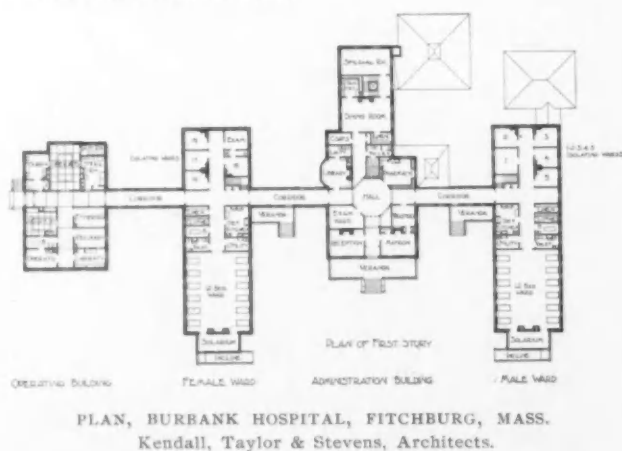
GRAPHIC STATICS, with Applications to Trusses, Beams and Arches. By Jerome Sondericker, B. S., C. E., Associate Professor of Applied Mechanics, Massachusetts Institute of Technology, New York: John Wiley & Sons, 1903.

This book is the outgrowth of a long experience at the Massachusetts Institute of Technology, and presents in very clear and concise manner the methods of solving



the water is all expelled by the first heat, though it is practically impossible to fuse it." We have seen this statement challenged by some pretty good scientific authority, but the author of this book does not seem at all in doubt as to the facts.

problems such as are encountered in building construction. There is very little superfluous matter in the volume and it embodies in a practical, usable form a great



The volume is very profusely illustrated, with maps showing the location of the principal deposits, very clear photographs of the working beds, and diagrams of the geological deposits and formations. It is a work which will interest a great variety of professional and practical



SUBWAY, NEWTON HOSPITAL, NEWTON, MASS.

deal of valuable data. The chapter on the analysis of the connections between trusses and supporting columns is an original discussion of a very important factor in building calculations. The book is thoroughly to be commended.

## A Suburban Clubhouse. Article II.

BY J. H. FREEDLANDER.

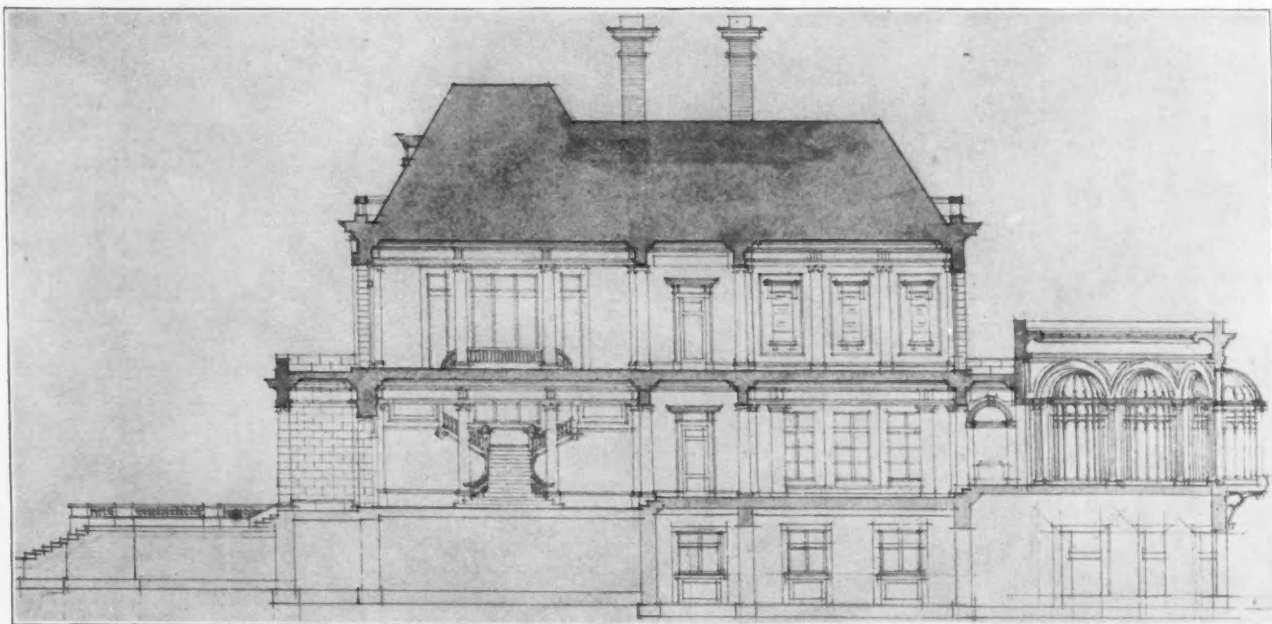
[PROGRAM. The location is supposed to be in a semi-rural district, ten miles or less from the center of a large city where everybody goes to do business, the suburb being chiefly a place of residence. The club is therefore used for many social purposes by both sexes, — dancing, musicals, singing clubs, dramatic performances and lectures, as well as for occasional dinner parties and the customary games. The lot is big enough for tennis courts, being 200 feet front by 300 feet deep, with the gardens of detached houses on both sides. There are no sleeping rooms in the club except the apartment for the steward and his wife, who live there. The ground falls gently towards the rear, permitting a well lighted basement behind, with level approach in front. The number of members belonging to the club is not large, and all are supposed to be known to each other, so that many rooms

much as possible. It is for this reason that I have provided a veranda, a most essential thing in an out of town club, a sort of open air living room.

As the cost of the building is not to exceed \$25,000, the façade is naturally modest, so that I depend somewhat upon the color scheme for desired effects. The exterior materials are brick and terra-cotta. The coins on the corners are of a light gray brick laid in mortar of the same color, with close joints. The filling in of the panels is of Harvard bricks, and the keystone, cornices, caps, ballusters, etc., are of terra-cotta to match the light brickwork.

The roofing tile is to be of a light green color without glaze. The conservatory in the rear of the building is built of iron, very light in construction.

Passing into the building through the vestibule we enter the main hall. Here we have a clear view of about one hundred feet; the conservatory with its small trees



SECTION, A SUBURBAN CLUBHOUSE.

are not required. The success of the plan will depend chiefly upon the skill with which the same rooms are made to serve the convenience and enjoyment of large and small parties in turn. Two stories with the basement ought to provide sufficient space.

The materials are to be, so far as the exterior is concerned, burnt clay in some of its forms, and the same materials may enter into the interior construction and decoration of the building, at the discretion of the contributor.

The cost of the building, not including furnishings or land, should not exceed \$25,000.]

THE chief requirements in a clubhouse of this nature are, first, the accessibility of the rooms; and, second, that they shall be made to serve easily for large and small gatherings.

The rooms should be exceptionally well lighted and the window openings large and numerous, so that members may enjoy a view of the surrounding country from every point of the building.

Being in the country we desire to live out of doors as

and many blossoms acts as a background. We have just entered the building and are already under the impression that it is well adapted to social purposes. The openings between the rooms are wide and the communications easy.

The plan has but three axes, making it necessarily simple and compact. The main axis, running through the hall, is about one hundred feet long and the transverse axis about eighty feet.

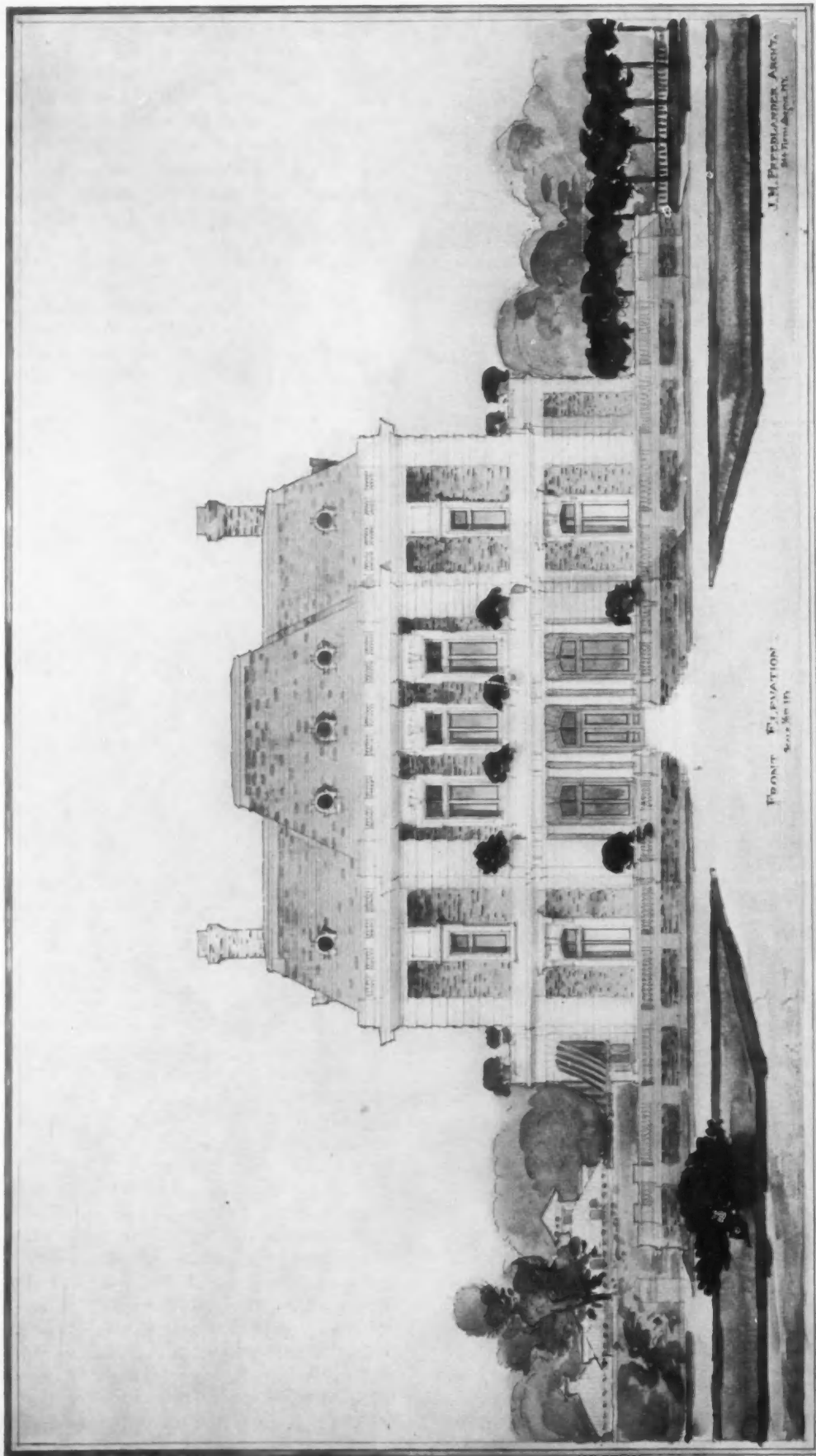
These long sweeps of rooms, with their large window openings, allow a thorough circulation of air.

The hall is well lighted from all sides, it is centrally located, and with its staircase makes a very comfortable and cool lounging room. It is simply and classically treated with Ionic columns and cornice, all in Keene cement.

The reception room is to the left of the hall, and is the only quiet part of the clubhouse, well adapted to a reading and writing room. It contains a small open fireplace built entirely of brick.

The hall, reception room and conservatory floors are

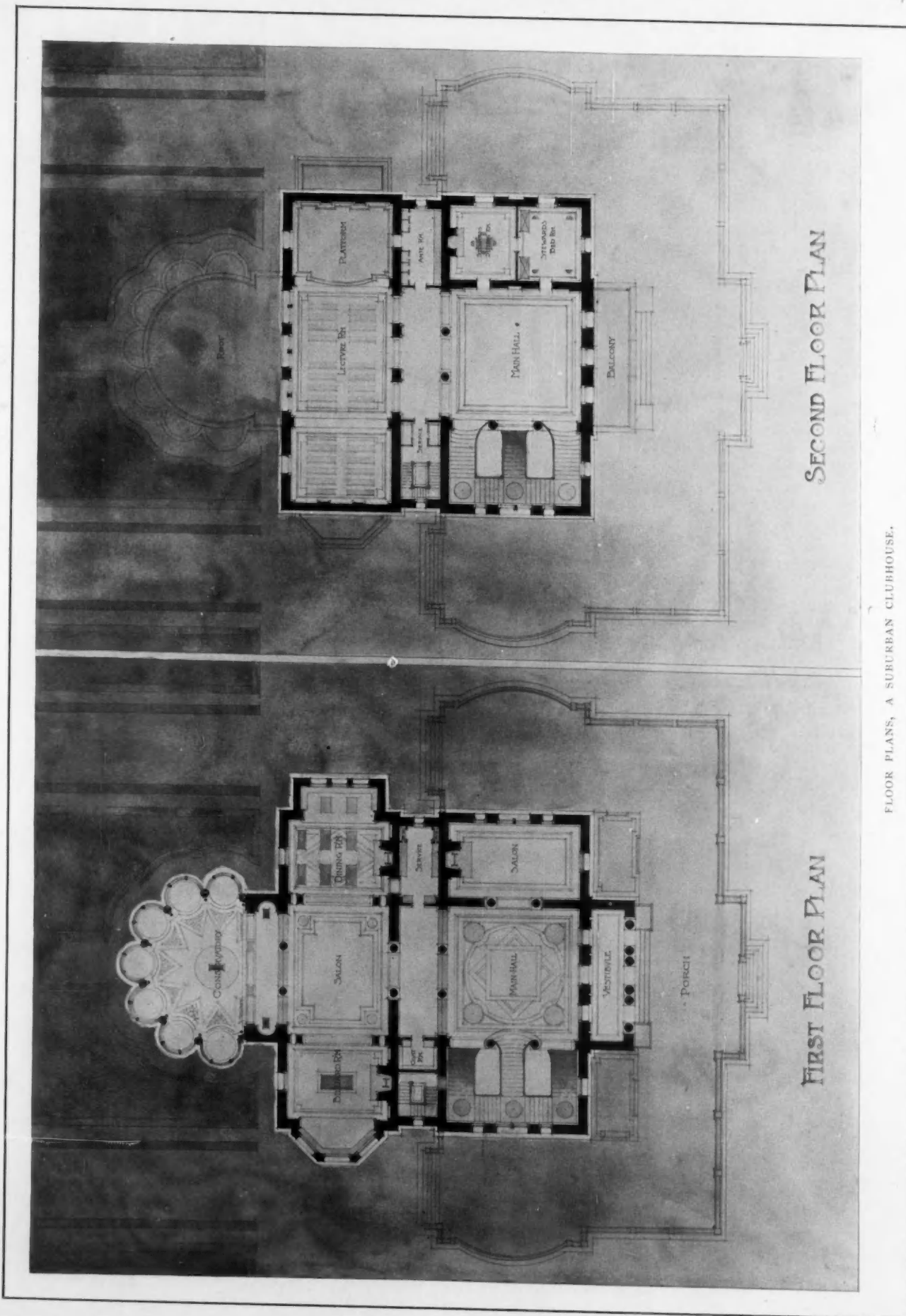




J. H. Freedlander, Architect.

A SUBURBAN CLUBHOUSE.





FLOOR PLANS, A SUBURBAN CLUBHOUSE.

to be of burnt clay mosaic, the rest of the flooring throughout to be of wood.

The salon, dining room and conservatory form an open suite of rooms, well adapted to the club purposes. The dining room is small, but in case of dinner parties the salon adjoining could be used, thereby accommodating about one hundred persons. Serving the dining room is a comfortable pantry with dumb waiters, etc.

The billiard room is placed to the left of the salon. It contains but one table and a platform for spectators in bay window recess. The bay windows in both dining and billiard rooms are very open, thereby well lighting the suite of three rooms.

The main staircase is six feet wide and occupies the full width of the hall, and finishes on the second floor with a double run.

The main hall on the second floor would be used principally as a quiet sitting room. It contains three large window openings and a small balcony over the vestibule.

In case of receptions, dances, etc., the hall would make a comfortable lounging room, as it adjoins the lecture room.

The lecture room, besides being used for dances, lectures, etc., would serve the purpose of exhibition room for paintings, etc. There is ample wall space, and the pictures would receive an abundance of light from skylight. Adjoining the lecture room is a small anteroom.

The steward, being the only person living at the club, has an apartment on the second floor, consisting of a chamber and sitting room.

The kitchen, laundry, etc., are situated in the rear of the basement. The entrance to these rooms is in the rear.

The interior finish throughout is to be, wherever practicable, of burnt clay in its various forms, such as enameled terra-cotta, faience, brick, tile, etc. The dining room and billiard room will have a wainscoting four feet high.



HOUSES, HOLLY GROVE, BOURNVILLE.

## A New English Village.

JUST outside Birmingham, the well-known firm of chocolate manufacturers, Messrs. Cadbury Brothers, Ltd., have built a model village for their employees, following, no doubt, the example of Messrs. Lever Brothers at Port Sunlight near Liverpool. This new village is called Bournville and is of quite recent development, the whole of it having been built since 1895. Mr. Cadbury's object is to alleviate the evils which arise from the unsanitary and insufficient housing accommodation of large numbers of the working classes, and to secure to workers in factories some of the advantages of outdoor



DOUBLE HOUSE, BOURNVILLE.

village life, with opportunities for the natural and healthful occupation of cultivating the soil.

At the beginning of February this year W. Alex. Harvey, the young architect to whom the work of its design was intrusted, read a paper on the subject before the Architectural Association of London, and we are able to give a summary of it in this issue of *THE BRICKBUILDER*, supplemented by plans and photographs.

Bournville has now more than five hundred houses. Most of those built before 1901 have two sitting rooms, a scullery, three bedrooms and the usual conveniences. Larger ones of later date have four, five and six bedrooms, and a bathroom supplied with hot and cold water. During the last two years several cottages have been built with one large living room instead of two smaller ones, a scullery with bath sunk in floor or disposed of in other ways to economize space, three bedrooms, and in some cases an attic. Others are now built with two bedrooms, for small families.

There is an average garden space allowed each house of six hundred square yards, which is found to be as much as one man can attend to. The rents range from \$1.50 a week (rates included) to \$3 (rates not included), and there are a few houses of a larger class at higher

rentals. The village is served by Birmingham with gas, water and sewers.

Although much has been said of higher percentages, four per cent on the outlay is the most that should be expected in building houses of this class. The profit on the outlay is often exaggerated, and it may be well to

houses one might suggest getting as many details as nearly the same as possible, such as windows, doors and door frames (or, at any rate, half of one kind and half of another), avoiding the monotony by a variation of the disposition of these features. An extensive elevation may also be made interesting by the treatment of



HOUSES, LINDEN ROAD, BOURNVILLE, BACK VIEW.



HOUSES, LINDEN ROAD, BOURNVILLE, FRONT VIEW.

point out that six per cent gross will rarely pay four per cent net, as is often stated.

In building a street of houses the expense would of course be very great if, to get variety, we employed a different plan and different details for each house. We have recourse to other methods. In the case of fifty

a porch here, the addition of a bay window there, and the use of rough-cast somewhere else. In a block of three cottages a pleasing effect is gained by projecting or recessing the middle one, or putting one the long way on and so forming a forecourt.

To say that care should be taken to well ventilate



floors is almost a platitude; nevertheless this is sometimes overlooked in the effort to save a trifling expense, in spite of the fact that in the long run, when dry-rot sets in, a considerable expense is inevitable. There should be a bed of concrete over the whole site, and plenty of air-bricks should be employed to thoroughly ventilate ground-floor joists, and the same (or whatever ground-work is used under joists) should be, if possible, above the level of the ground around the house. This prevents any chance of water collecting under floors.

The following is the accommodation of one of the smallest types of cottages erected at Bournville (in blocks of four):

*Ground Floor:*

Living room, 13 feet 6 inches by 12 feet 6 inches.

Scullery, with cabinet bath, 10 feet 6 inches by 7 feet.

Larder under stairs.

Coals and water-closet.

Small paved yard.

Lobby.

Size of garden, 600 square yards.

*First Floor:*

Front bedroom, 13 feet 6 inches by 12 feet 6 inches.

Back bedroom, 16 feet 6 inches by 7 feet.

Small linen closet.

Total cost, including laying out of garden and all extras, about \$850 per house.

Estimated net return, \$34 per house, equivalent to four per cent.

At Bournville eight per cent gross yields about four per cent net.

This type is of the smallest possible dimensions and simplest construction; the roof runs uninterruptedly from end to end, and the building throughout is of a very inexpensive character. In this class of design every simplicity should be studied: unnecessary roof complications should be avoided, and the chimneys, in order to diminish trimming, flashing, etc., should be grouped together and brought to the highest point of the roof to avoid down draughts and smoky flues. If efficient ventilation is provided it is not essential that each bedroom should have a fireplace. Nooks and recesses doubtless make a room interesting, but in small cottages of this

kind they are too expensive to introduce and, instead, the best must be made of materials, color and proportions if we are to secure four per cent on the outlay.

A very important point to emphasize regarding cottages of all sizes is *compactness of plan*, and there should be an aim at getting wall lines as long and as unbroken as possible. Where practicable all outbuildings should

be arranged under the main roof, otherwise when cottages are semi-detached one of them must suffer through the projecting roof of the other. This precaution also admits of a better view of the garden from the living rooms, and the glimpse of green is no small consideration in the building of cottage homes. Care should be exercised in the planning of corner cottages to avoid the yard being exposed to the road, and where necessary it should be enclosed, so as to keep the week's wash away from public gaze.

It should be remembered that the position of the larder, which when possible should be north or north-east, is of no small domestic importance.

Another type of cottage built at Bournville has the following accommodation:

*Ground Floor:*

Living room, 17 feet by 16 feet, with inglenook and bay.

Scullery, 13 feet by 10 feet 6 inches, having bath sunk in floor.

Larder, 5 feet by 6 feet. Coals, water-closet and small paved yard.

Veranda in front.

*First Floor:*

Bedrooms, 17 feet by 13 feet 6 inches, 8 feet 6 inches by 9 feet 6 inches and 13 feet by 8 feet 6 inches.

Small box cupboard.

Attic, 16 feet by 17 feet.

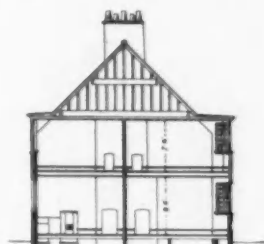
Total cost, about \$1,500.

In view of the advantage of one spacious and healthy living room over the parlor plan, this class of cottage has been largely introduced at Bournville.

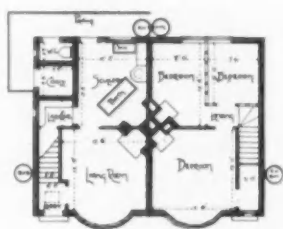
Mr. Harvey considers that the heights of 8 feet 6 inches for ground floor and 8 feet for bedrooms are quite adequate for the average cottage, so long as sufficient ventilation is provided. Floor space is the most important consideration in the economic building of cottage homes.



FRONT ELEVATION.



SECTION.



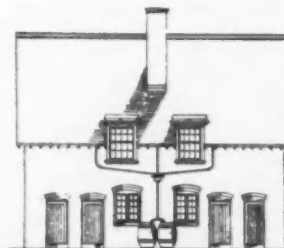
HALF GROUND AND CHAMBER FLOOR PLANS.



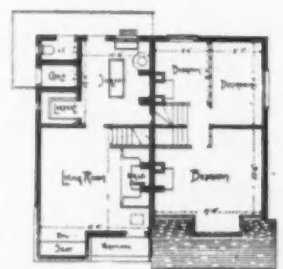
BACK ELEVATION.



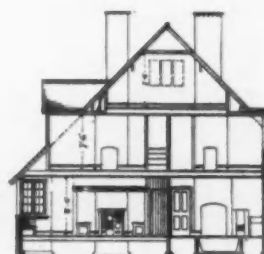
FRONT ELEVATION.



BACK ELEVATION.



HALF GROUND AND CHAMBER FLOOR PLANS.



SECTION.

COTTAGES, WILLOW ROAD, BOURNVILLE.



He also observes that the cottage with the long sloping roof, of which there are many examples at Bournville, has one great advantage, for if the front walls were carried up level with the ceiling line of bedroom, besides the building suffering in lack of proportion, the expense of extra brickwork would be considerable. Generally speaking, the height of bedrooms to the point of intersection of the roof and wall need be no more than 5 feet 6 inches. Ample ventilation may be got by the simple insertion of a 9-inch by 7-inch air-brick in the outside wall and a tobin tube within, about 5 feet 6 inches from floor, the cost of the latter being only about three shillings.

The cottage is not of a size to admit of a bathroom, so that the bath has to be sunk in the floor of the kitchen near the hearth, which is covered by what may be used as a standing or draining board, or if sufficient room not

#### *First Floor:*

First bedroom, 13 feet 6 inches by 11 feet 3 inches.

Second bedroom, 14 feet 6 inches by 11 feet 3 inches.

Third bedroom, 10 feet 6 inches by 8 feet 3 inches.

Bathroom (hot and cold water).

Total cost, including laying out of garden and all extras, about \$1,925 per house.

Estimated net return, \$77 per house, which is equal to four per cent.

A good window sill is formed of calf-nosed bricks set on edge in cement, with two courses of tiles beneath, which forms a drip under sill, and a backing of slate, also in cement. By bringing the window frame forward to reduce the size of the top of the sill, two curses of small property—damp and driving in of rain at this point—are prevented.



SEMI-DETACHED COTTAGES, WILLOW ROAD, BOURNVILLE.

sunk, but covered by what can be used as a settle or table. In some cases the patent adjustable bath has been used, being hinged at one end in order that it may be raised and lowered from a cabinet, the upper portion having shelves and forming a cupboard, where it is kept in a vertical position, much room being saved thereby.

The following is an example of a cottage where a clear four per cent is made on the outlay. A large number have been built to this plan at Bournville. The accommodation is:

#### *Ground Floor:*

Parlor, 13 feet 6 inches by 11 feet 3 inches, and bay.

Living room, 14 feet 6 inches by 11 feet 9 inches.

(French window.)

Kitchen, 12 feet 3 inches by 10 feet 6 inches.

Larder, 6 feet by 6 feet 3 inches.

Porch and hall, and cloak space under stairs.

Tools, water-closet and coals enclosed yard, and 600 square yards garden.

As to wall decoration in interiors for small cottages, Mr. Harvey has found it advisable to use papers instead of color wash, as the latter is very soon soiled by children. In the better houses a color wash may be at first used and a paper added later, with a frieze. A good effect is also obtained by bringing down the white from the ceiling as far as the picture rails; these latter should be placed in the smallest houses, if only to save the plaster.

With regard to bricks, as far as possible he uses the brindled Staffordshires. They are suitable for cottage building, because a pleasing variety of color is introduced at a low cost, the tints being a bright cherry red, blended with purple and blue—the last of which is quite different from the indescribable vitreous blue.

There is a strong temptation to introduce a variety of colors upon exteriors, but with cottages of the class being dealt with it is advisable to refrain from doing so. Mr. Harvey's experience has been that it is best to get the color in masses, treated broadly, not in bits—say, each

house of one color; for where the cottages stand close together, or even where they are semi-detached, the contrast or relief is borrowed from the neighboring one, and



THE INN, BOURNVILLE.

in the case of a village a much better general effect is thus gained.

With regard to the thickness of walls, his opinion is that a nine-inch wall outside is quite sufficient and is to be preferred to the cavity wall. Southwest fronts should be protected by overhanging eaves, but where this is impossible the face should be whitewashed, by which not



COTTAGES, BOURNVILLE.

only is damp largely prevented, but an effective appearance gained.

Half-timber for exteriors he does not recommend. District councils insist on a nine-inch wall being at the back; thus not only is its use false art, but an unwarranted present and future expense; besides, an effect equally as good is obtained with rough-cast or whitewash. Half timber one lives to regret, for the weather tells sadly, and it demands constant repair.

A garden arrangement largely adopted at Bournville is as follows: At the bottom are eight apple and pear trees and fruit trees, which, besides being reasonably expected to bear fruit, form a screen between houses

which are back to back. The paths are made of six inches of ashes and three inches of gravel. The position of the grass plot and ornamental bed at the top permits a little soothing green and flash of color to be seen from within the house.

Given a plot of land upon which four houses are to be erected, it is advisable, in order to more equally distrib-



SMALL COTTAGE, BOURNVILLE.

ute the garden space, say, of about five hundred or six hundred square yards per house, to spread them laterally by arranging the staircase, not between the rooms, but between the houses, thus widening (not lengthening) the building. This, bringing the remote houses nearer the



PART OF DOUBLE COTTAGE WITH GARDEN, BOURNVILLE.

extremity of the land, not only gives the garden plot the preferable straightness, but a breadth of view upon same is obtained from within, and the yard space is materially widened.

## Fireproofing.

### FALSE ECONOMY IN FIREPROOFING.

IN a building erected some years since which cost complete three hundred and sixty-five thousand dollars, the contract price for the terra-cotta floor blocks was seventeen thousand dollars, or 4.65 per cent of the total cost of the building. In another building erected only a short time since, quite elaborate in its design and constructed with an exterior entirely of granite and hence quite expensive in price per foot, the total cost was one million dollars, while the entire fireproofing was contracted for at thirty-eight thousand dollars, or 3.8 per cent of the cost of the whole. It is probably safe to say that the whole expense of fireproofing need never exceed five per cent of the cost of any building, this price of course covering merely floors and other protective work, but not the beams or columns themselves. The difference between the very cheapest forms of so-called fireproof construction and the very best which scientific ingenuity has thus far evolved would be represented by a sum considerably less than one-half of one per cent of the total cost of the ordinary building. And yet the security of the entire structure is often very correctly measured by the quality of the fireproofing. Under such circumstances it seems the height of folly to consider anything but the best when fire protection is desired. Rather than to cut on so relatively inexpensive a factor of the whole cost of the building, our architects and constructors ought to feel justified in considering that in this part of the work the question of expense does not cut any figure, and that the most careful study of each problem ought to be made to solve it in just the right way, rather than to adopt the least expensive method, because at the very most the best way does not involve such a large amount of money, and the best is none too good to serve its purpose. During the past year the country has had a great deal of very stirring practical experience in connection with fireproofing construction and methods, and with each recurring fire or conflagration the testimony of architects, engineers and all who have given such questions serious study has been to emphasize the necessity for more care, better methods and more complete protection. If therefore we are to rightly profit by all these examples it is beyond question the duty of the architect and the engineer to advise his client to pay for what gives the most for his money, and under no circumstances to curtail this most essential feature of the building.

There is another direction in which a great deal of false economy is practised. In the days of not so very long ago, before architectural engineering was an exact science, many of our best builders seemed to possess a sense by virtue of which they could tell by merely looking at it whether a beam or a column was sufficiently strong. They often made mistakes, but on the whole it is doubtful if their mistakes were any more far-reaching than such as have occurred more recently as a result of too close shaving in the calculations of an engineer. Beam and column calculation has been brought to a nicety. The factor of safety is no longer a real factor of ignorance, as was so often the case in the past, but we

must not save in our steel beyond reasonable limits, and it is a question whether our engineers do not figure too closely and not make sufficient provision for shocks, for unexpected loads or even for indifferent workmanship. There are some cases where the trained judgment of a practical builder is worth more than a set of Carnegie tables, and the Hotel Darlington accident has shown how quickly a steel frame building may collapse.

### SETTING OF TERRA-COTTA FIREPROOFING.

NO matter how complicated may be the setting of a piece of terra-cotta nor how necessary it may be to fit terra-cotta fireproofing for a certain place in a way which might best be appreciated by those who designed it, it is nevertheless impossible to have this work done under the immediate direction of the manufacturers who are most interested in having it done right. The result is constant vexation and disappointment to every architect and manufacturer who know how well terra-cotta may be set by experienced hands. The recent strike of the bricklayers in New York virtually hinged upon this question. The terra-cotta manufacturers from the very first have insisted that their specially trained men are most competent to handle their material; but between the subcontractor, who has only a reflected obligation to architect and owner, and the labor unions, who in their blind conceit are bound to conquer or destroy the labor market, the terra-cotta manufacturer and the building itself generally suffer. If the time should come when the owner, who is the one who after all pays the bills, will have the courage to take a determined stand and insist upon his work being done by trained men, or if the labor unions could by some wise dispensation of providence come under the sway of capable men, there would be hope that we might have this very important portion of the work done as it should be. The terra-cotta manufacturers want it, and it is not in any sense a question of cost. It is merely a blind, unreasoning prejudice on the part of the unions, which results in a loss to every one concerned, the owner, the architect, the builder, the mechanic himself, and, as has been often shown by our large fires, the insurance companies are also sufferers by this mediæval rule.

There was a time when terra-cotta was the only fireproofing material in general use. During the past decade, and more especially the latter part of it, the patented systems of reinforced concrete have been studied very thoroughly by engineers, and a great deal has been made of them. The weak point in terra-cotta fireproofing is the setting, never the material itself. And yet every now and then a fire reveals careless setting and indifferent filling of joints, which the constructor and the superintendent thoroughly deplore, which every fireproofing company knows full well how to avoid, but which with the existing sentiment of the bricklayers really cannot be avoided. The bricklayers are very shortsighted if they cannot reason it out that it is more to their own selfish interests to have terra-cotta used and used rightly than it is to have our contractors turn for relief from the poor setting to a use of concrete in which they can employ trained labor.



## Editorial Comment and Selected Miscellany

### THE HOTEL DARLINGTON.

WE are interested to note that the grand jury acting upon the loss of life in the case of the collapse of the Hotel Darlington, New York, has condemned the present system of the building bureau in New York and recommend the removal of Inspector French. The sub-contractors for the steel and iron work were not indicted, and the jury explained it partially by stating that in the case of one of them "his ignorance was so great and his intelligence so limited as to render him practically incapable of appreciating the responsibility of his undertaking." The real responsibility the jury placed upon the owner,

excellent recommendation is that the inspectors employed by the Building Department be required to be competent engineers of experience who shall receive adequate compensation. We should be interested to know who were the members of this grand jury. Their recommendations sound as if they had been



DETAIL BY MULLIKEN & MOELLER,  
ARCHITECTS.  
New York Architectural Terra-Cotta Co.,  
Makers.



TECO VASES, MADE BY AMERICAN TERRA-COTTA AND CERAMIC CO., CHICAGO.  
Designed by W. B. Mundie (Jenny & Mundie).



DETAIL BY F. H. KIMBALL,  
ARCHITECT.  
Excelsior Terra-Cotta Co.,  
Makers.

who induced such a contractor to undertake a task for which he was so manifestly unfit. The jury condemns the whole building inspection system as being grossly inadequate, the number of inspectors absurdly small, and the compensation allowed them insufficient to secure men of the requisite intelligence and capacity. French, the inspector whose duty it was to examine the condition of the steel and iron work on the hotel, was characterized as grossly negligent in the performance of his duties and as a person entirely unfit for his position. The jury makes, among others, some most excellent recommendations. They state emphatically that the erection of steel or iron buildings without the immediate supervision of the original architects or a competent expert in such construction, licensed by the city of New York for that purpose, should be prohibited by law, and the jury deplores the practice of some architects in selling their plans without supervision. Another

prompted by some very clear-headed and fearless architect or engineer. The average jury does not usually rise to great keenness of discernment. The case in this instance is stated so clearly, the troubles and their remedies are so patent to every one who knows anything about the conduct of building operations, that the authorities in New York City certainly do not lack for precise instructions as to how to avoid such disasters in the future.

### A FAIENCE MANTEL.

We illustrate on page 87 a panel which forms the top of a mantel which will be exhibited by the Hartford Faience Company at the St. Louis Exposition.



DETAIL BY PALMER, HALL & HUNT,  
ARCHITECTS.  
Northwestern Terra-Cotta Co., Makers.



CITY HALL STATION OF THE NEW YORK SUBWAY, SHOWING GUASTAVINO CONSTRUCTION.  
Heins & La Farge, Architects.



DETAIL BY C. B. J. SNYDER, ARCHITECT.  
Atlantic Terra-Cotta Co., Makers.

being in high relief. The ground is dark brown, the figures in three shades of brown, ranging from very dark to very light, the bodies and faces being the darker; the leaves are green, while the sun is a warm, strong yellow, and the sky is graduated, being about the same color as the sun near it, and shading up almost to a white at the top and the extreme sides. As executed it is a splendid representation of a sunrise with worshipping figures and with its soft colors and graceful modeling presents a beautiful picture. The modeling was done by Louis Potter, sculptor, New York City.

#### OF INTEREST TO ARCHITECTS WHO WILL VISIT THE ST. LOUIS EXPOSITION.

The Hydraulic Press Brick Company, St. Louis, Mo., extends to you a cordial invitation to use its offices, twelfth floor, Missouri Trust Building, as headquarters during your visit to the Louisiana Purchase Exposition, 1904. Writing materials, telephones and the services of stenographers will be pro-



DETAIL BY PAUL C. HUNTER, ARCHITECT.  
Standard Terra-Cotta Works, Makers.

The whole mantel is treated after the Della Robbia style, the subject of the design being the Fire-Worshippers, a religious sect composed mostly of Arabs in Persia and Arabia. The panel is nine feet long and five feet high, the figures



DETAIL EXECUTED BY ST. LOUIS TERRA-COTTA CO.

vided, and arrangements made to receive and care for mail.

The large and well-appointed offices of this company are centrally located in the business section of the city, and will afford ample accommodation to all who are desirous of availing themselves of the opportunities offered.

#### IN GENERAL.

Richard Keeler Mosley, architect, announces the removal of his offices from Produce Exchange Building to No. 1 Nassau Street, New York City.

A. I. Lawrence and Howland C. Bates have formed a copartnership for the practice of architecture, with offices at Berlin, N. H.

Frederick F. French, architect, formerly of Bradford, Pa., is now located in the Bessemer Building, Pittsburg. Manufacturers' catalogues and samples desired.

William Emerson, architect, has opened an office at 81 Madison Avenue, New York City.

Manufacturers' catalogues and samples desired.

An architectural department has been established in connection with The Craftsman Workshop at Syracuse, N. Y. Manufacturers' catalogues and samples desired.



DETAIL EXECUTED BY NEW JERSEY TERRA-COTTA CO.

The Boston Architectural Club gave a complimentary dinner on the evening of April 23 to Mr. Ralph Adams Cram, who is about to sail for Europe. During the evening Mr. Cram gave a talk on the Architecture of Japan.

The Cincinnati Roofing Tile and Terra-Cotta Company has been awarded one of the largest, if not the largest order



for roofing tile that has ever been placed in this country. It is for the Battle Mountain Sanitarium, Hot Springs, South Dakota, Thomas Kimball, architect. The contract will require about forty-eight carloads of roofing tile.

The following letter, signed by the president of the Safe Deposit and Trust Company of Baltimore, is perhaps as valuable in many respects as a report would be if made by an engineering expert:

BALTIMORE, March 5, 1904.

MESSRS. HENRY MAURER & SON, New York.

*Gentlemen,*—It gives us great pleasure to testify to the manner in which the porous hollow tile material furnished and erected by you in the roofing of the Safe



TOP PANEL OF A MANTEL, REPRESENTING THE FIRE-WORSHIPERS.

ABOUT 9 FEET LONG BY 5 FEET HIGH.

Executed in Faience by the Hartford Faience Co.  
Louis Potter, Sculptor.

Deposit and Trust Company of Baltimore Building stood the terrific heat to which it was subjected by the fire which so lately wrecked so many of the buildings of this city.

The fireproof roof of your "Eureka" design, on account of its fireproof quality and also owing to its strength and first-class construction, though severely tested by the heat and the weight of falling material from adjoining buildings, helped to prevent ingress of the

flames and contributed to the saving of our building.

Very truly yours,

MICHAEL JENKINS, *President.*

Lewis Warren Pulsifer, architect, formerly of Boston, has opened an office in the Majestic Building, Denver, Colorado, and will be glad to receive manufacturers' catalogues and samples.

Henry Maurer & Son, 420 East 23rd Street, New



FRISCO BUILDING, ST. LOUIS, MO.

Eames & Young, Architects.

Built of gray speckled brick furnished by Columbus Brick and Terra-Cotta Co.



DETAIL OF FOUNTAIN DESIGNED AND MODELED BY  
R. HINTON PERRY, SCULPTOR.

Executed in Glazed Terra-Cotta by Perth Amboy Terra-Cotta Co.

UORM



STABLE FOR JOHN D. ROCKEFELLER, ESQ., TARRYTOWN, N. Y.  
York & Sawyer, Architects.  
Covered with American "S" Tiles furnished by Cincinnati Roofing  
Tile and Terra-Cotta Co.

York City, wish it announced that neither their firm nor their business is in any way connected with the National Fireproofing Company. This announcement is made for the purpose of correcting a wrong impression.

Mulliken & Moeller announce a removal of their office



ALGONQUIN HOTEL, WEST 44TH STREET, NEW YORK CITY.  
Fireproofed with Burnt Clay Tile.

from 7 East 42nd Street to 7 West 38th Street, New York City.

The trustees of the Carnegie Technical Schools have outlined the terms of the architectural competition for the

proposed new buildings, which are expected to be the largest and most complete of their kind in the world. The purpose is to select an architect for the buildings through the designing of a scheme for the entire group. Five architects have been selected and invited to prepare competitive designs and have accepted. They will be paid \$1,000 each. Other architects, when approved by the committee, will be permitted to enter the competition. To these competitors awards are offered of \$1,000 each for the five plans first in order of merit. Architects may address A. A. Hamerschlag, director of the Carnegie Technical Schools, Pittsburg, for competitive blanks.

COMPENDIUM OF DRAWING. Compiled from the Courses of the American School of Correspondence at Armour Institute of Technology, Chicago, Ill. In two volumes.

These volumes include the regular instruction papers in the mechanical engineering and draughting courses of the American School of Correspondence, indexed and bound together in convenient form for ready reference. Although published primarily to acquaint the public with the practical value of the courses and the instruction offered by the School of Correspondence, and representing only a small portion of the complete courses, these volumes contain a great deal of condensed practical information which would be of immediate value to the draughtsman, student or teacher. The scope of the two volumes includes an admirable treatise on architectural lettering, also shades and shadows, architectural perspective, machine design and drawing, sheet metal pattern making and pen and ink rendering. The good which the correspondence schools can accomplish is seldom fully appreciated. They reach not only the class of busy young men who have had neither the time nor the money to follow the courses in a technical school or university, but they are also great helps to the professional man as supplementing his earlier technical training. The courses are so entirely devoid of mere padding and the information is so condensed to its most readily appreciated factors that the information imparted is quickly assimilated by any one who really wants to acquire the knowledge. These volumes are thoroughly to be commended.

An architect on Fifth Avenue, New York, is willing to share, or sublet a part of, his suite of offices which are in a desirable location. Inquiries may be addressed to THE BRICKBUILDER.

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AMERICAN SCHOOL OF CORRESPONDENCE  
AT  
Armour Institute of Technology,  
CHICAGO ILLINOIS

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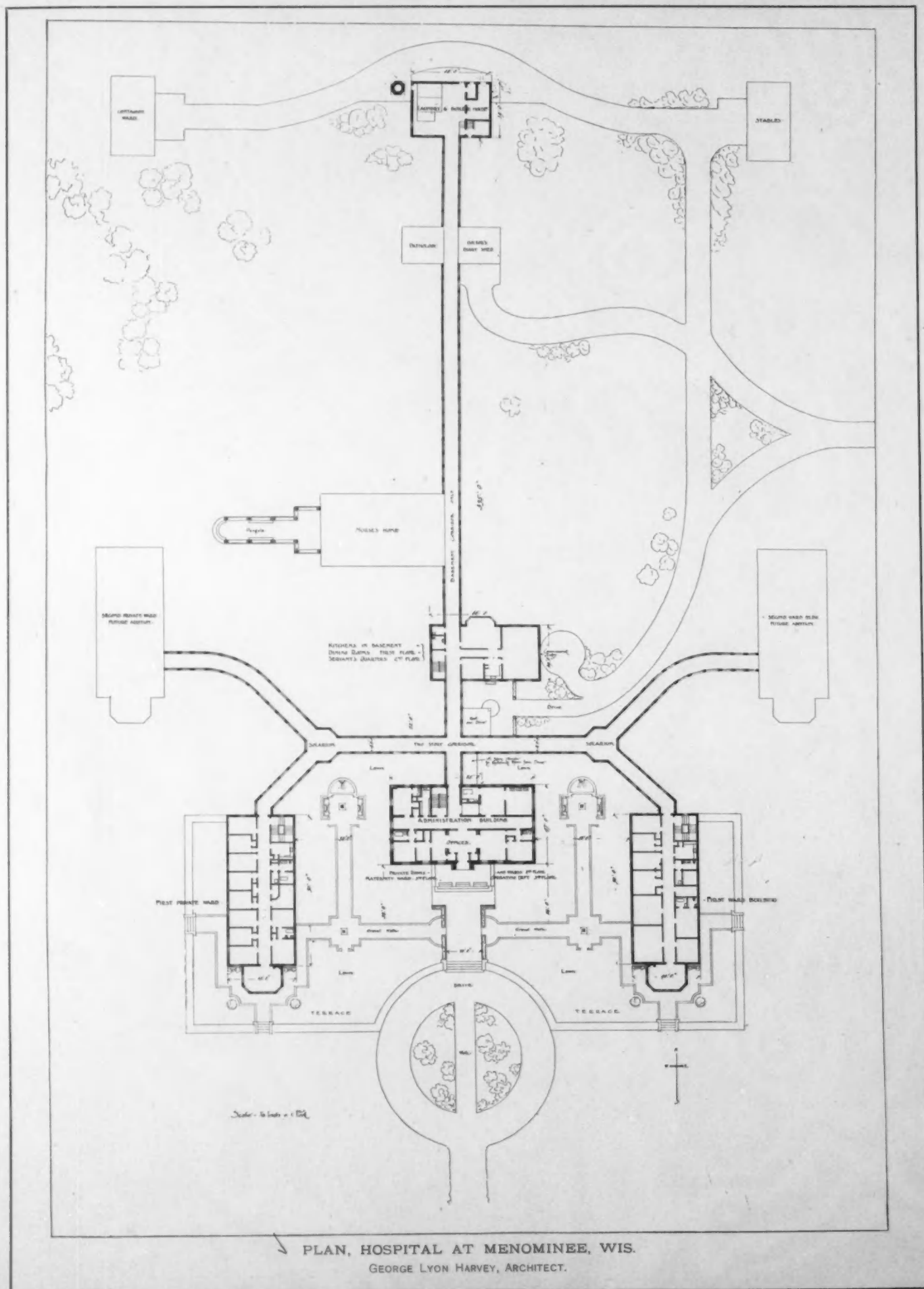




# THE BRICKBUILDER.

VOL. 13. NO. 4.

PLATE 25.



PLAN, HOSPITAL AT MENOMINEE, WIS.  
GEORGE LYON HARVEY, ARCHITECT.

VOL. 13. NO. 4.

PLATE 26.



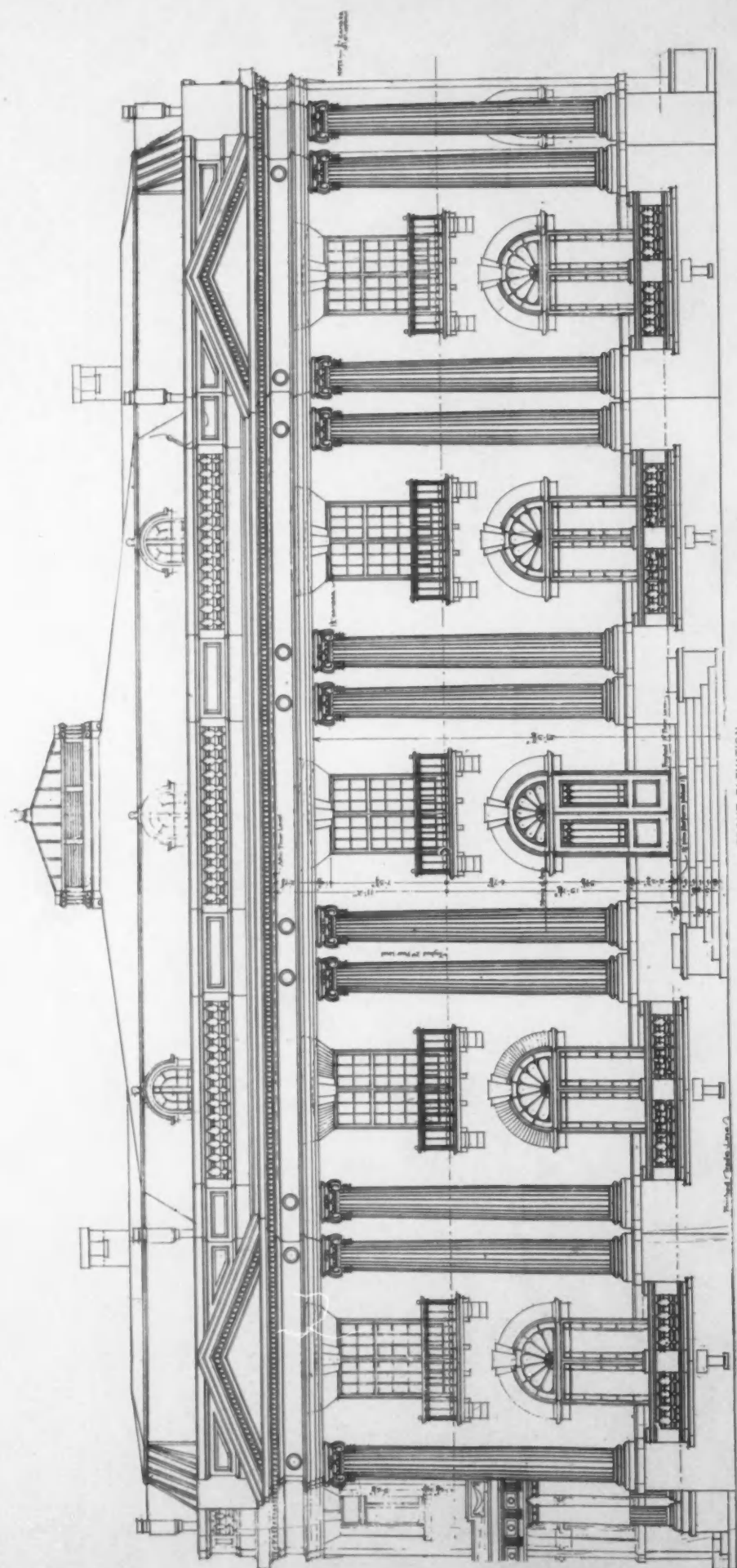
BASEMENT PLAN.

FIRST FLOOR PLAN.

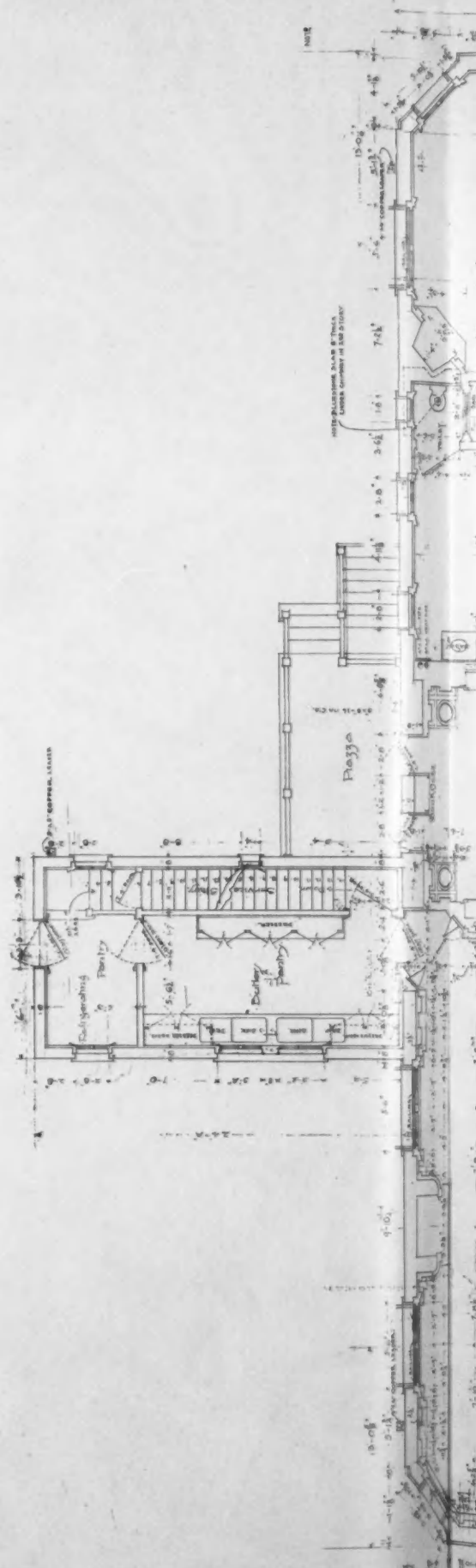
SECOND AND THIRD FLOOR PLAN.

PLANS, THREE-APARTMENT HOUSE FOR HON. HENRY S. DEWEY, BEACON STREET, BOSTON.

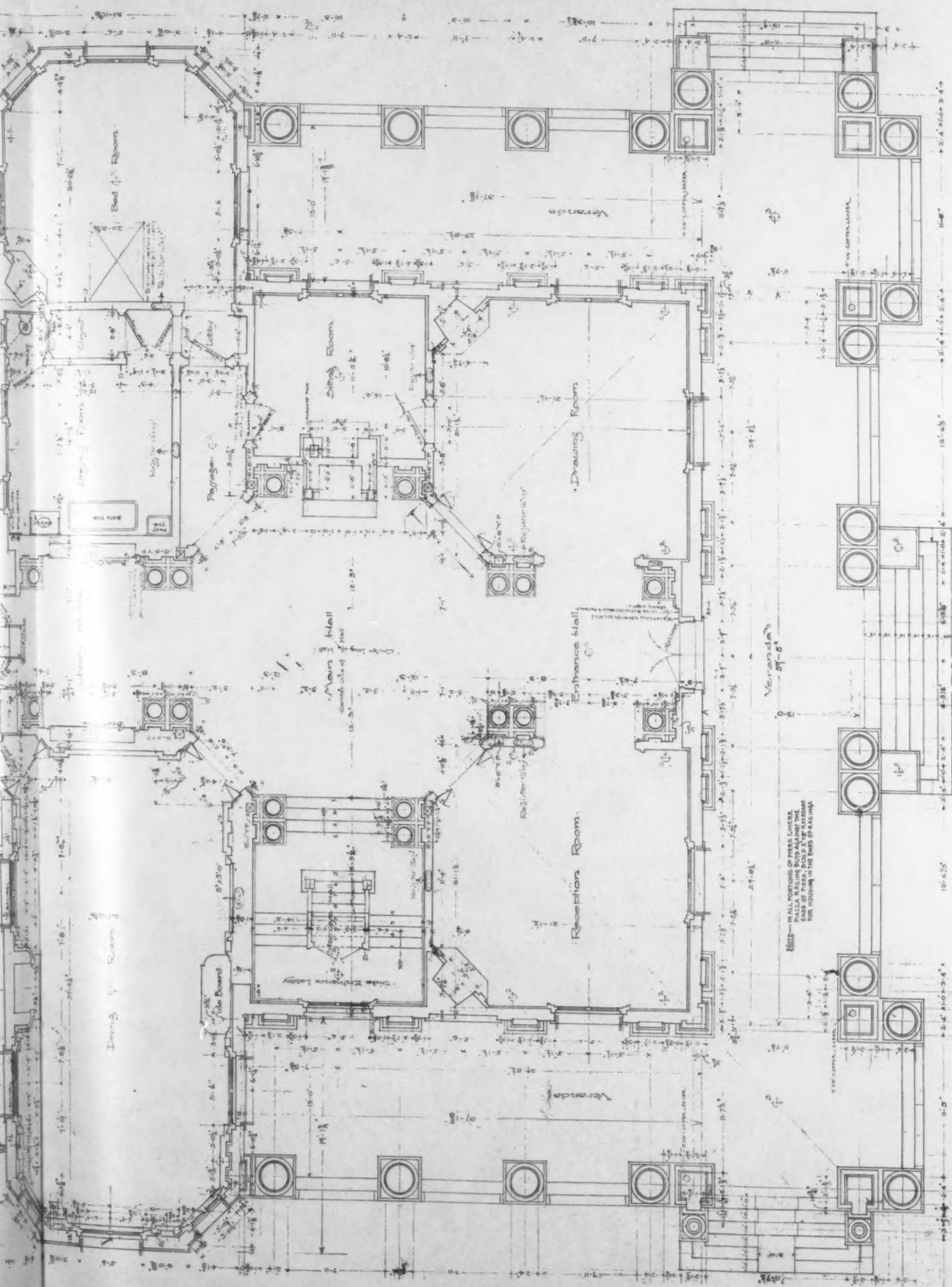
KILHAM & HOPKINS, ARCHITECTS.



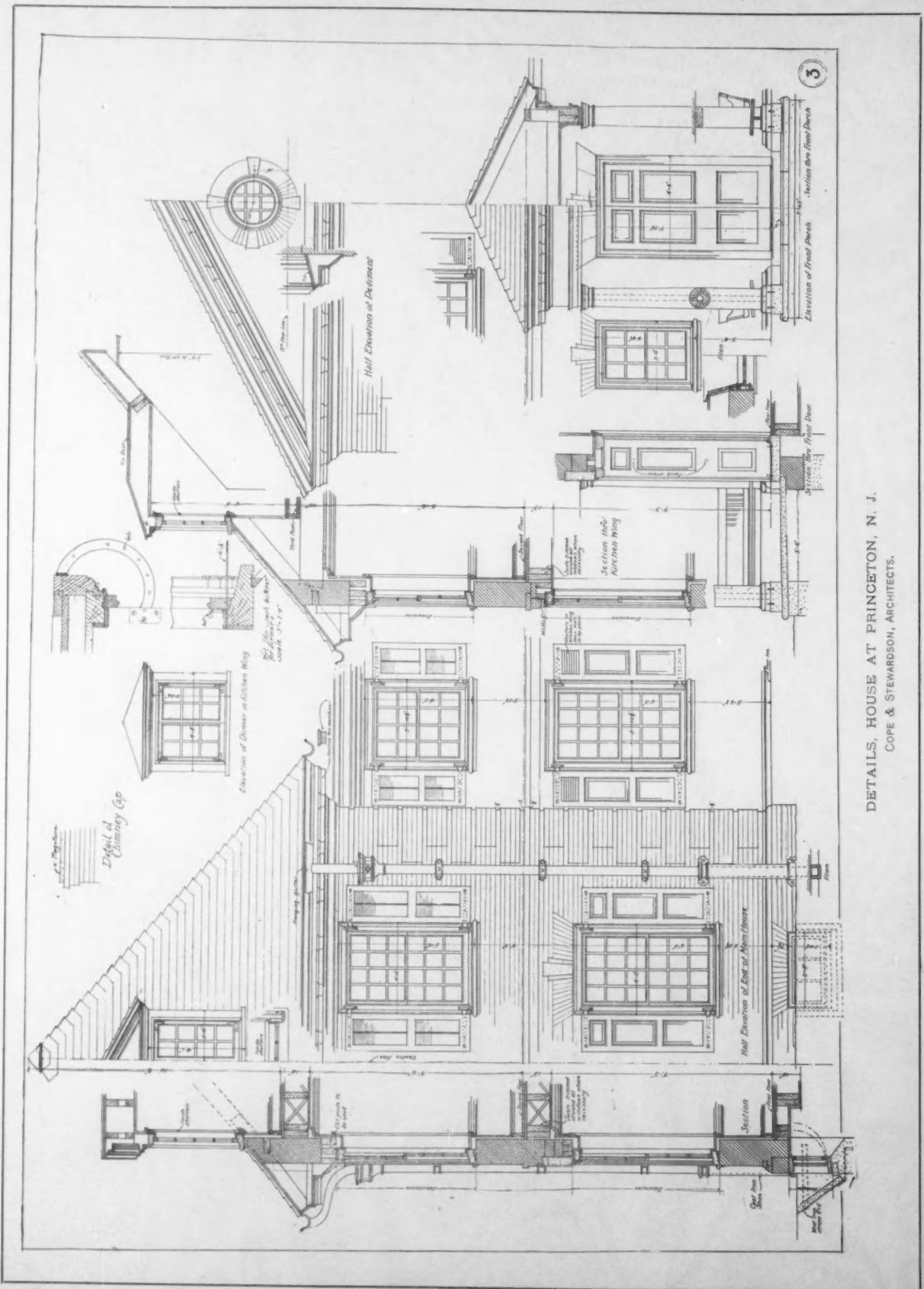
FRONT ELEVATION.



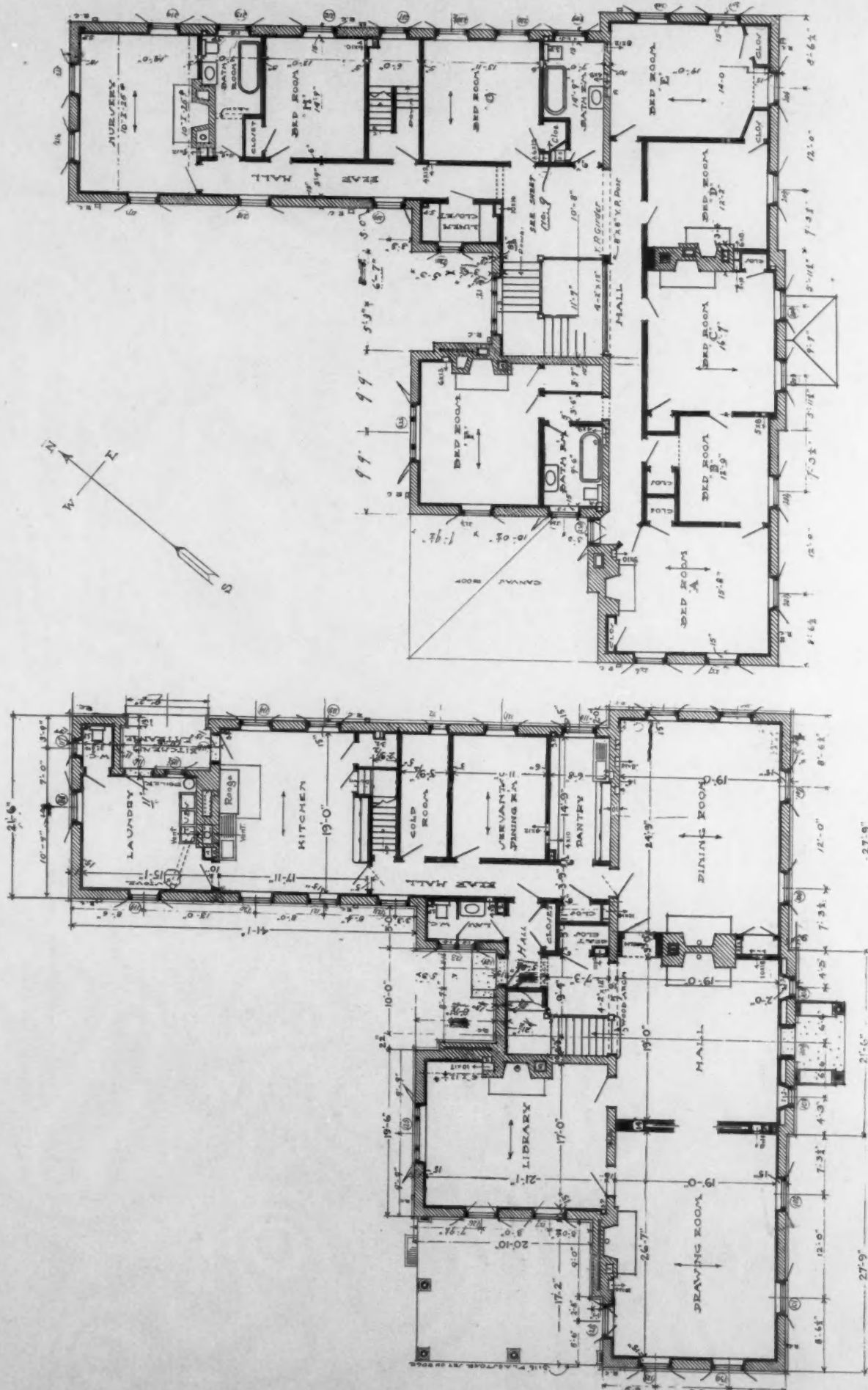




FIRST FLOOR PLAN.  
HOUSE FOR SPENCER P. SHOTTER, ESQ., SAVANNAH, GA.  
INGLE & ALMIRALL AND RAYMOND F. ALMIRALL, SUCCESSORS, ARCHITECTS.



DETAILS, HOUSE AT PRINCETON, N. J.  
COPE & STEWARDSON, ARCHITECTS.



SECOND FLOOR

FIRST FLOOR

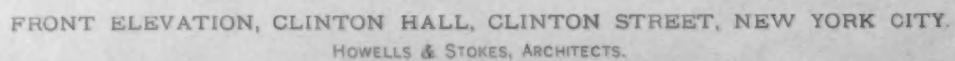
COPE & STEWARDSON, ARCHITECTS.

FLOOR PLANS, HOUSE AT PRINCETON, N. J.

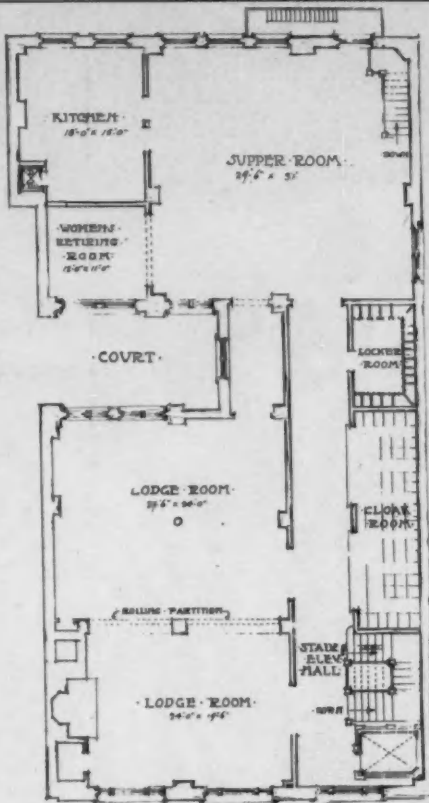


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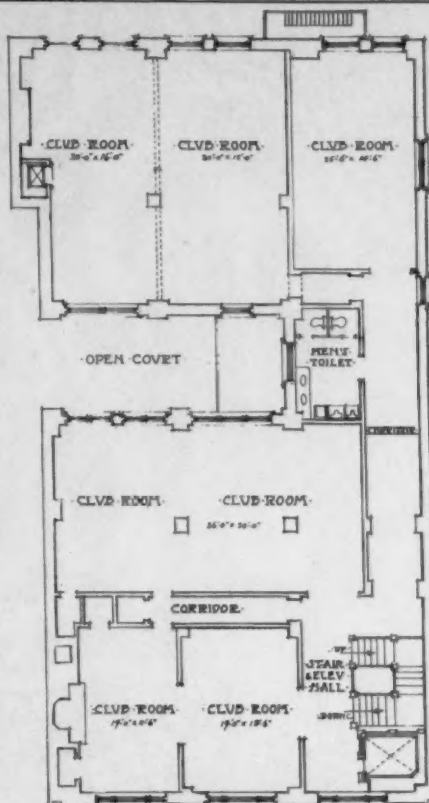
PLATE 31.



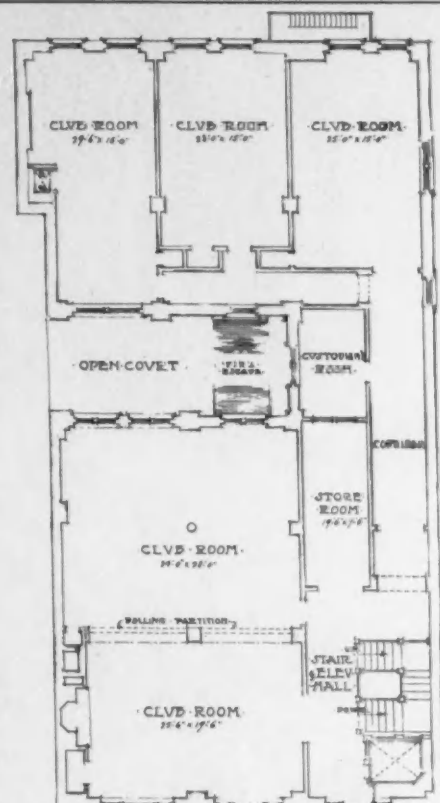
HOWELLS & STOKES, ARCHITECTS.



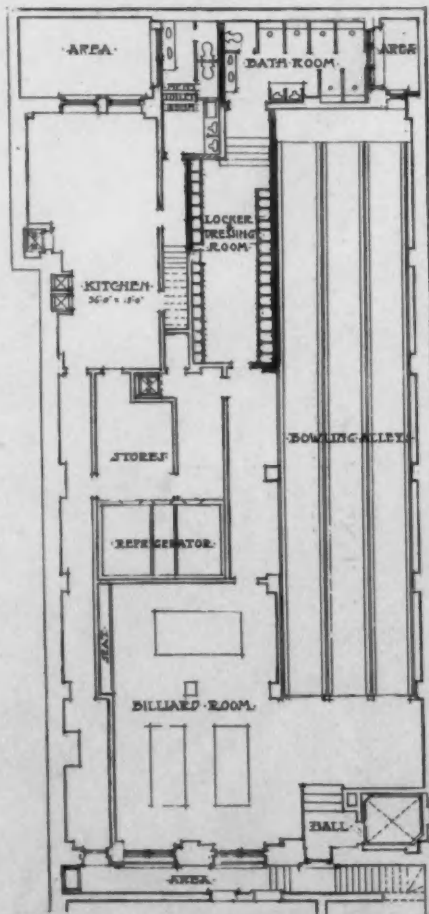
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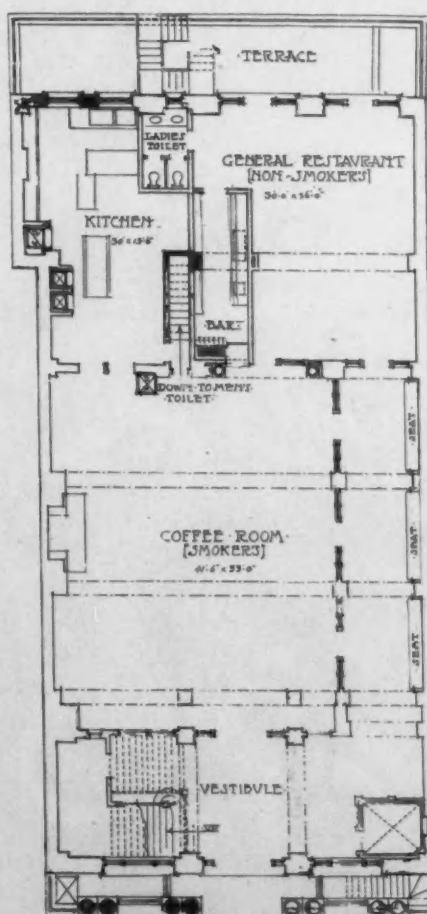
FOURTH FLOOR PLAN.



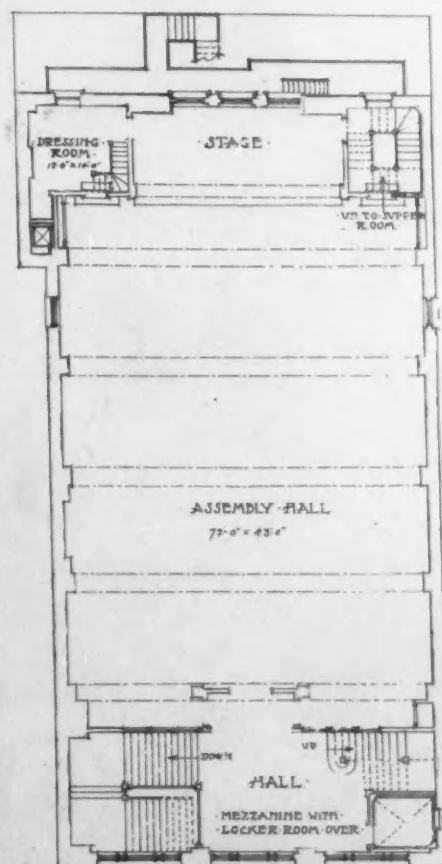
FIFTH FLOOR PLAN.



BASEMENT PLAN.



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

FLOOR PLANS, CLINTON HALL, CLINTON STREET, NEW YORK CITY.

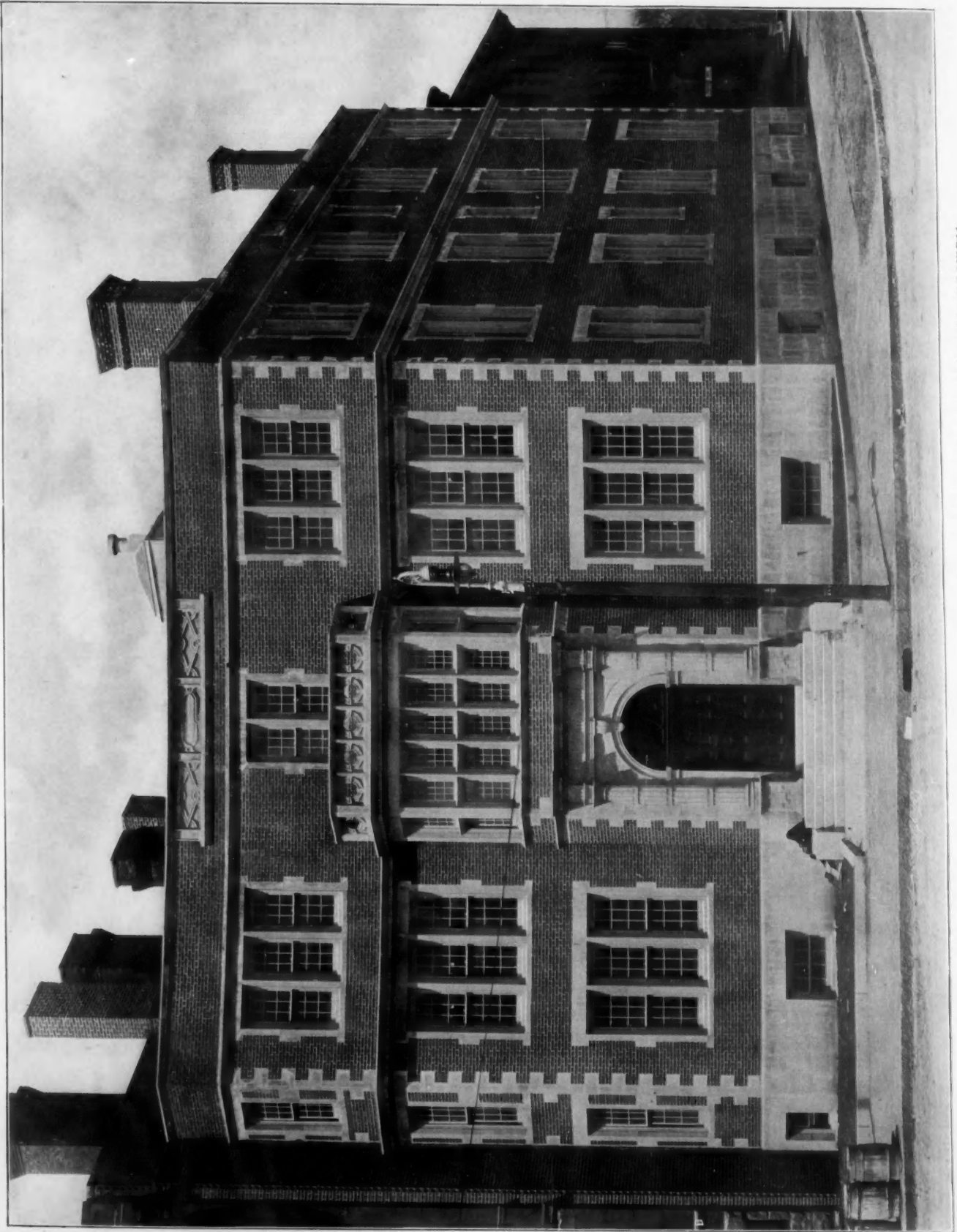
HOWELLS & STOKES, ARCHITECTS.







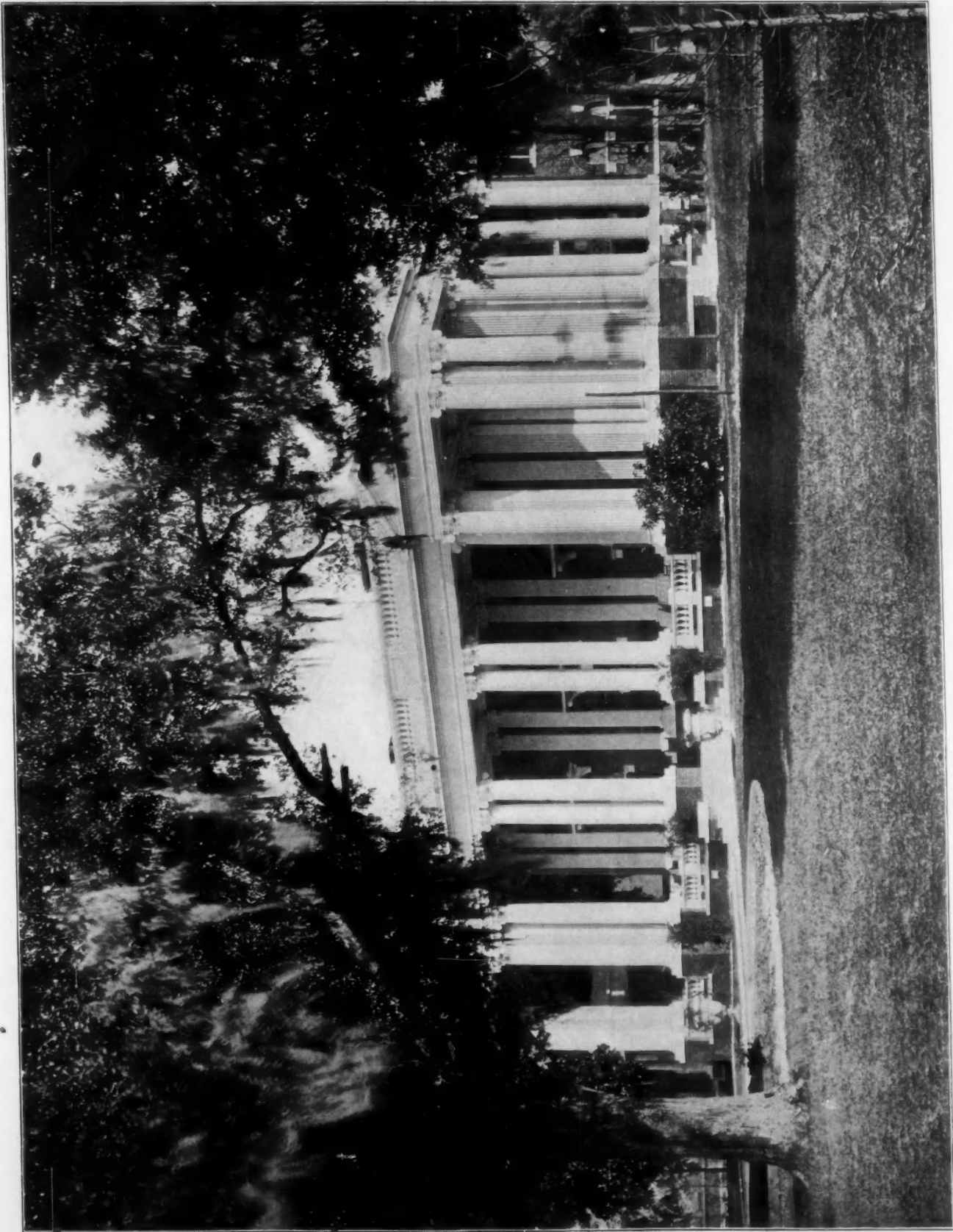
THE BRICKBUILDER,  
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THREE-APARTMENT HOUSE FOR HON. HENRY S. DEWEY, BEACON STREET, BOSTON.  
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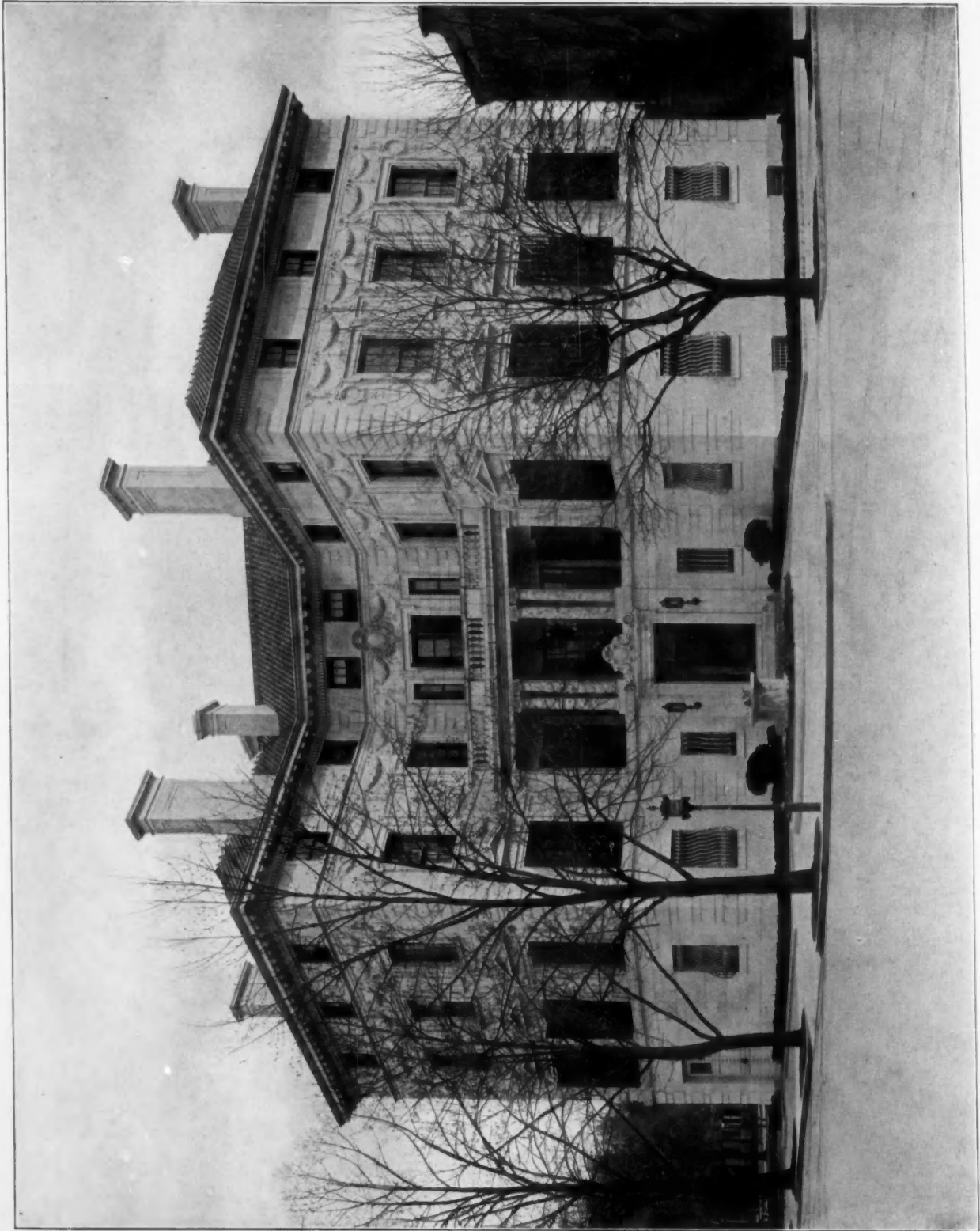


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